

OFDA Annual Report FY 1991



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OFDA ANNUAL REPORT

FY1991

The FY 1991 Annual Report of the Agency for International Development/Office of U.S. Foreign Disaster Assistance was researched, written, and produced by Franca Brilliant, Jan Coffey, Gabrielle Dennis, Faye Henderson, Dennis J. King, Valerie Newsom, and Beverly Youmans of Labat Anderson Incorporated in Arlington, Virginia, under contract number PDC-0000-C-00-8153-00. "New Directions in PMP" was written by Suzanne Burgess of Basic Health Management, Inc.



Photo 1. A Sierra Leonean mother and her child in a displaced persons camp in Guinea

Photo by LeVonne Harrell, AID/FHA/OFDA

Photo 2. The Panama earthquake left huge ground fissures

Photo by Alejandro James, OFDA/Costa Rica

Photo 3. Daily traffic continues on a flooded city street in Cambodia

Photo courtesy of U.S. Committee for Refugees

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FY 1991 DISASTERS

ASIA

| | |
|--|----|
| Bangladesh Cyclone | 18 |
| Cambodia Floods | 25 |
| Laos Floods | 29 |
| Maldives Storm | 31 |
| People's Republic of China Flood | 33 |
| Philippines Typhoon | 36 |
| Philippines Volcanic Eruption | 39 |
| Thailand Accident | 46 |
| Other Asia Declared Disasters | 48 |
| Afghanistan Earthquake/Floods | |
| Burma Fire | |
| Burma Floods | |
| Indonesia Earthquake | |
| Malaysia Accident | |
| Pakistan Earthquake | |
| People's Republic of China Typhoons | |
| Sri Lanka Floods | |

AFRICA

| | |
|--|-----|
| Angola Displaced Persons | 56 |
| Burkina Faso Drought | 61 |
| Chad Epidemic | 63 |
| Ethiopia Displaced Persons | 65 |
| Ethiopia Drought/Civil Strife | 67 |
| Madagascar Cyclone | 76 |
| Malawi Floods | 78 |
| Mozambique Civil Strife/Drought | 81 |
| Somalia Civil Strife | 85 |
| Sudan Drought/Civil Strife | 90 |
| West Africa Civil Strife/Displaced Persons | 99 |
| Other Africa Declared Disasters | 106 |
| Benin Floods | |
| Cameroon Food Shortage | |
| Chad Civil Strife/Drought | |
| Congo Accident | |

| | |
|---------------------------------|--|
| Djibouti Displaced Persons | |
| Ethiopia Explosion | |
| Guinea-Bissau Displaced Persons | |
| Madagascar Civil Strife | |
| Mauritius Cyclone | |
| Niger Epidemics | |
| Niger Food Shortage | |
| Rwanda Displaced Persons | |
| Swaziland Drought | |
| Zaire Emergency | |

EUROPE & NEAR EAST

| | |
|---|-----|
| Albania Emergency | 116 |
| Iraq Displaced Persons | 119 |
| Lebanon Civil Strife | 129 |
| Other Europe and Near East Declared Disasters | 131 |
| Kuwait Emergency | |
| Romania Floods | |
| Soviet Union Earthquake | |

LATIN AMERICA & THE CARIBBEAN

| | |
|--|-----|
| Costa Rica Earthquake | 137 |
| Honduras Floods | 140 |
| Panama Earthquake | 142 |
| Peru Epidemic | 145 |
| Other Latin America Declared Disasters | 150 |
| Argentina Volcanic Eruption | |
| Chile Floods/Mudslides | |
| Costa Rica Earthquake | |
| Costa Rica Floods | |
| Haiti Civil Strife | |
| Haiti Emergency | |
| Jamaica Floods | |
| Panama Floods/Mudslides | |
| Peru Earthquake | |

ACRONYM LIST

U.S. Private Voluntary Organizations (PVOs) and Private Groups

| | |
|---------------|--|
| ADRA | Adventist Development and Relief Agency |
| ARC | American Red Cross |
| CARE | Cooperation for American Relief Everywhere |
| CCF | Christian Children's Fund |
| CRS | Catholic Relief Services |
| CWS | Church World Service |
| FHI | Food for the Hungry International |
| HKI | Helen Keller International |
| IRC | International Rescue Committee |
| LWR | Lutheran World Relief (U.S.) |
| MAP | Medical Assistance Programs, International |
| MCI | Mercy Corps International |
| SCF/US | Save the Children Federation/U.S. |
| WVRD | World Vision Relief & Development |
| YMCA | Young Men's Christian Association |

International Non-Governmental Organizations (NGOs)

| | |
|---------------|--|
| CAFOD | Catholic Agencies for Overseas Development (U.K.) |
| SCF/UK | Save the Children Fund/U.K. |
| MSF | Medecins sans frontieres (Doctors Without Borders) |

International Organizations

| | |
|--------------|---|
| EC | European Community |
| FAO | U.N. Food and Agriculture Organization |
| ICRC | International Committee of the Red Cross |
| IDNDR | International Decade for Natural Disaster Reduction |
| IOM | International Organization for Migration |
| LRCS | League of Red Cross and Red Crescent Societies |
| LWF | Lutheran World Federation |
| PAHO | Pan American Health Organization |
| UNDP | U.N. Development Program |

| | |
|---------------|--|
| UNDRO | U.N. Office of the Disaster Relief Coordinator |
| UNHCR | U.N. High Commissioner for Refugees |
| UNICEF | U.N. Children's Fund |
| WCC | World Council of Churches |
| WFP | World Food Program |
| WHO | World Health Organization |

U.S. Organizations

| | |
|-----------------|--|
| AFB | Air Force Base |
| A.I.D. | Agency for International Development |
| CDC | Centers for Disease Control (U.S. Department of Health & Human Services) |
| CINCPAC | Commander-in-Chief Pacific (DOD) |
| DART | Disaster Assistance Response Team |
| DOD | Department of Defense |
| FFP | Food for Peace Office (A.I.D.) |
| FFW | Food-for-work, aid program |
| FEWS | A.I.D.-sponsored Famine Early Warning System |
| FY | Fiscal year |
| OFDA | Office of U.S. Foreign Disaster Assistance (A.I.D.) |
| RP | Bureau of Refugee Programs (U.S. Department of State) |
| Southcom | U.S. Southern Command (DOD) |
| USAID | A.I.D. overseas Missions |
| USFS | U.S. Forest Service |
| USG | United States Government |
| USGS | U.S. Geological Survey (U.S. Department of the Interior) |

Other

| | |
|------------|--|
| DP | displaced persons |
| ORS | oral rehydration salts (a sugar-salt combination for diarrheal diseases) |
| PMP | Prevention, Mitigation, and Preparedness |
| TDY | temporary duty (assignment) |

MESSAGE FROM THE DIRECTOR

“Prompt United States assistance to alleviate human suffering caused by natural and manmade disasters is an important expression of the humanitarian concern and tradition of the people of the United States. . . . [T]he President shall insure that the assistance provided by the United States shall, to the greatest extent possible, reach those most in need. . . .”

These few, simple words of United States law, authorized by the Congress, provide the essential mandate of the Office of U.S. Foreign Disaster Assistance. The pages that follow report on our efforts in 1991 to meet this mandate from the American people.

The social, political, and ideological tumult that shook the world in 1991—the breakup of the Soviet Union, the Gulf War, multiple crises in the Horn of Africa—swept OFDA as well. OFDA’s 45 staff and advisors responded to a near-record number of disasters, from the cataclysmic Mt. Pinatubo eruption, to the multiple humanitarian crises following the breakup of the Mengistu dictatorship in Ethiopia, to the massive Kurdish relief effort.

The world’s efforts to reach a stable new order achieved real successes in 1991. The reconfiguration of the Soviet Union and much of Central Europe, the transitional control over nuclear weapons stockpiles, and the resolution of several East-West regional conflicts were attained.

But this reordering in the international system also spawned regional instability and humanitarian crises, causing widespread human suffering in places like Kurdistan. In fact, the Kurdish relief effort exemplifies the milieu in which humanitarian relief operations must often operate in the 1990s.

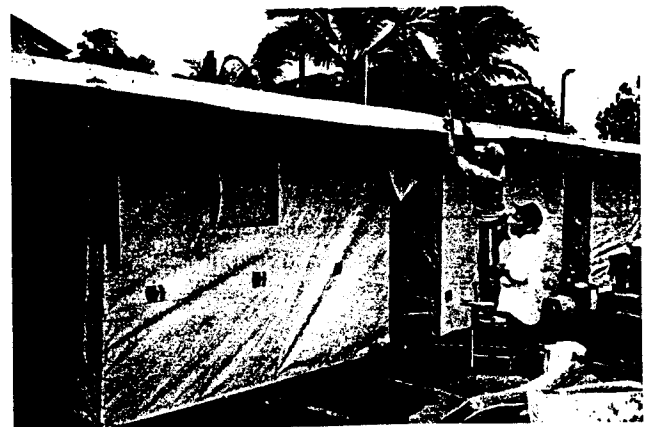
OFDA employees and other relief workers increasingly focus on reaching disaster victims in environments of conflict. In addition to traditional skills like measuring child malnutrition or shipping plastic sheeting for emergency shelter, emergency specialists are grappling with demining assessments, the needs of demobilized soldiers, negotiations with armed groups for the passage of needed food supplies, and methods to bring available military resources into the disaster relief effort.

The summaries of the Kurdish, Somali, Ethiopian, and numerous other disaster responses on the following pages describe this modern—and dangerous—environment. These summaries also describe the creative and courageous response of the women and men who attempt to deliver disaster assistance in these circumstances.

Two other developments in 1991 are of particular importance as we try to improve our ability to assist the children, men, and women who are suffering because of natural or man-made disasters. The first is significant reform of the U.N. system for managing disaster response. The second is further progress in OFDA’s development of prevention, mitigation, and preparedness programs.

At the United Nations, member states—with strong U.S. backing—created a new Department of Humanitarian Affairs to coordinate and speed up the response of U.N. agencies to humanitarian crises. The new unit is intended to lead an integrated response of all U.N. agencies when a disaster strikes. OFDA is working closely with the new Undersecretary General for Humanitarian Affairs to ensure that the world can increasingly rely on rapid, effective U.N. leadership in the disaster assistance field—including conflictive crises.

At OFDA, we continued to increase our investment in the prevention, mitigation, and preparedness activities—before disaster strikes—that are critical to saving lives and lessening human suffering when disasters do occur.



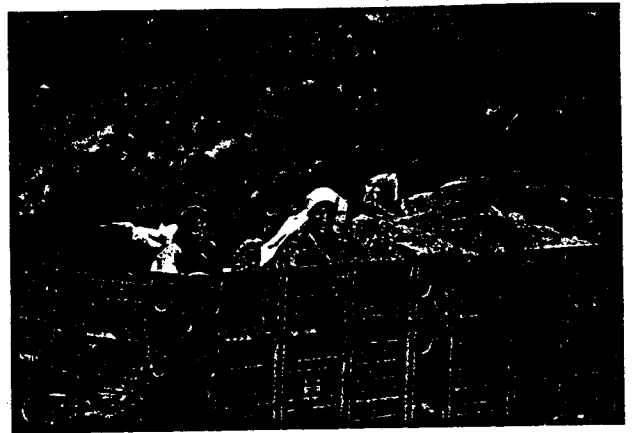
Temporary shelter being constructed with OFDA plastic sheeting in Costa Rica

Photo by Alejandro James, OFDA/Costa Rica

The staff completed a major study in 1991 of the world's most disaster-prone countries and an analysis of those investments—for example, development of drought resistant seeds; zoning in landslide-prone areas; market-related insurance incentives to encourage hurricane- or earthquake-resistant building techniques—that pay the biggest dividends in lives saved and economic progress preserved.

One final note: anyone reading OFDA's 1991 report cannot fail to be impressed with the ubiquitous references to the many American private voluntary organizations—"PVOs" in the Washington jargon—active in the disaster assistance field. As the new director of the Office of U.S. Foreign Disaster Assistance, I am repeatedly amazed at the courage, resourcefulness and dedication of these "PVOs" and their workers. I believe I speak for the entire OFDA staff in saying that we could ask for no better partners in delivering American humanitarian assistance to disaster victims around the globe.

James R. Kunder
Director
Office of U.S. Foreign Disaster Assistance



Kurdish refugees at Kairi Masi way station, on their way down from the mountains

Photo by Ronald Libby, OFDA/Forest Service

U.S. FOREIGN DISASTER ASSISTANCE SUMMARY BY FISCAL YEAR

| FY | NO. OF NEW DIS- ASTERS | NO. OF COUNTRIES | NO. KILLED | NO. AFFECTED | DISASTER RESPONSE IDA FUNDS | OTHER USG ASSISTANCE |
|--------------|------------------------------|---------------------|------------------|----------------------|-----------------------------------|----------------------------|
| 1964 | 29 | 23 | 3,112 | 3,992,241 | \$2,928,499 | \$3,305,661 |
| 1965 | 46 | 32 | 46,943 | 14,504,499 | \$2,438,872 | \$18,722,703 |
| 1966 | 46 | 35 | 7,044 | 4,672,245 | \$652,458 | \$1,038,740 |
| 1967 | 57 | 40 | 17,441 | 106,415,973 | \$3,743,051 | \$8,567,586 |
| 1968 | 48 | 36 | 3,844 | 5,521,382 | \$1,355,888 | \$9,509,891 |
| 1969 | 36 | 32 | 1,018,534 | 31,311,680 | \$4,446,757 | \$24,822,542 |
| 1970 | 50 | 36 | 72,915 | 8,518,309 | \$6,263,804 | \$11,859,373 |
| 1971 | 51 | 40 | 522,183 | 74,289,081 | \$15,822,511 | \$21,930,000 |
| 1972 | 29 | 27 | 115,381 | 13,435,589 | \$1,452,783 | \$210,289,507 |
| 1973 | 30 | 27 | 111,619 | 217,776,063 | \$14,062,254 | \$158,631,843* |
| 1974 | 20 | 19 | 101,608 | 12,819,240 | \$2,542,979 | \$31,827,590* |
| 1975 | 25 | 23 | 61,233 | 46,310,336 | \$7,006,385 | \$121,265,640* |
| 1976 | 25 | 23 | 78,262 | 38,375,279 | \$12,056,098 | \$123,410,000* |
| TQ | 6 | 5 | 6,589 | 708,700 | \$5,479,245 | \$277,108 |
| 1977 | 25 | 22 | 8,568 | 7,932,836 | \$21,445,529 | \$13,394,451 |
| 1978 | 33 | 27 | 28,269 | 52,134,391 | \$24,452,367 | \$1,720,101 |
| 1979 | 41 | 33 | 34,514 | 11,049,072 | \$24,548,448 | \$24,559,600 |
| 1980 | 32 | 27 | 1,635 | 7,760,985 | \$12,898,071 | \$68,312,206* |
| 1981 | 22 | 19 | 11,527 | 4,607,227 | \$6,613,724 | \$51,752,000* |
| 1982 | 35 | 29 | 43,352 | 40,463,621 | \$10,742,757 | \$51,040,086 |
| 1983 | 45 | 36 | 4,775 | 43,980,670 | \$8,016,403 | \$83,219,912 |
| 1984 | 47 | 39 | 3,463 | 34,233,123 | \$15,097,749 | \$51,378,416 |
| 1985 | 47 | 39 | 577,388 | 30,474,549 | \$19,863,848 | \$105,002,195 |
| 1986 | 47 | 38 | 26,311 | 8,313,429 | \$9,480,105 | \$79,218,769 |
| 1987 | 56 | 45 | 94,171 | 48,585,076 | \$24,991,031 | \$132,666,233 |
| 1988 | 66 | 46 | 379,538 | 137,355,138 | \$20,511,211 | \$76,463,691 |
| 1989 | 58 | 42 | 40,693 | 127,521,207 | \$22,926,112 | \$127,303,347 |
| 1990 | 53 | 44 | 81,754 | 52,156,794 | \$16,057,244 | \$147,604,596 |
| 1991 | 65 | 48 | 190,047 | 393,294,149 | \$26,451,018 | \$710,404,010 |
| TOTAL | | 1,170 | 3,692,713 | 1,578,512,884 | \$344,347,231 | \$2,469,497,797 |

*Includes funds from other A.I.D. accounts and/or supplemental appropriations administered by OFDA

| PL 480 | TOTAL USG ASSISTANCE | US VOLAGS | INTL COMM | SELF HELP |
|---------------|-------------------------|---------------|------------------|------------------|
| \$5,410,940 | \$11,645,100 | \$805,317 | \$533,790 | |
| \$25,213,459 | \$46,375,034 | \$3,627,301 | \$3,518,773 | |
| \$23,729,904 | \$25,421,102 | \$1,567,990 | \$9,476,353 | \$16,157,100 |
| \$69,045,881 | \$81,356,518 | \$12,220,053 | \$172,860,511 | \$2,964,667,000 |
| \$21,634,945 | \$32,500,724 | \$7,719,299 | \$15,943,626 | \$606,865,000 |
| \$73,349,178 | \$102,618,477 | \$12,971,207 | \$95,496,828 | \$130,974,000 |
| \$30,608,673 | \$48,731,850 | \$12,191,711 | \$59,515,671 | \$96,595,000 |
| \$119,839,732 | \$157,592,243 | \$16,676,273 | \$266,635,252 | \$744,839,000 |
| \$147,802,110 | \$359,544,400 | \$13,178,379 | \$610,660,963 | \$107,320,000 |
| \$114,230,970 | \$286,925,067 | \$29,251,411 | \$200,892,728 | \$631,705,000 |
| \$134,477,940 | \$168,848,509 | \$3,216,263 | \$90,252,901 | \$36,173,000 |
| \$86,808,619 | \$215,080,644 | \$16,079,881 | \$263,430,083 | \$39,043,100 |
| \$39,215,454 | \$174,681,552 | \$49,093,875 | \$338,820,728 | \$970,510,327 |
| \$602,876 | \$6,359,229 | \$1,139,554 | \$1,689,431 | \$198,900,000 |
| \$11,909,226 | \$46,749,206 | \$14,390,669 | \$59,541,298 | \$6,040,094 |
| \$42,021,193 | \$68,193,661 | \$6,224,223 | \$186,136,632 | \$276,946,722 |
| \$15,318,512 | \$64,426,560 | \$39,420,510 | \$661,374,390 | \$477,844,108 |
| \$57,814,655 | \$139,024,932 | \$1,533,448 | \$35,810,102 | \$11,847,900 |
| \$12,100,000 | \$70,465,724 | \$23,890,844 | \$211,844,949 | \$6,022,007,896 |
| \$29,000,100 | \$90,782,943 | \$27,258,957 | \$237,092,847 | \$141,901,880 |
| \$87,333,943 | \$178,570,258 | \$2,452,734 | \$203,946,587 | \$119,800,332 |
| \$102,891,700 | \$169,367,865 | \$5,999,463 | \$238,707,189 | \$198,095,040 |
| \$678,622,015 | \$803,488,058 | \$80,634,275 | \$961,557,220 | \$87,906,439 |
| \$209,052,740 | \$297,751,614 | \$6,541,512 | \$80,703,029 | \$105,376,068 |
| \$108,804,370 | \$266,461,634 | \$14,179,095 | \$526,447,730 | \$80,589,960 |
| \$204,450,008 | \$301,424,910 | \$18,725,223 | \$443,033,500 | \$73,821,584 |
| \$146,902,760 | \$297,132,249 | \$59,716,474 | \$653,086,042 | \$3,954,621,465 |
| \$350,736,916 | \$514,398,756 | \$47,338,014 | \$1,009,029,123 | \$562,218,065 |
| \$461,017,379 | \$1,197,872,407 | \$33,754,729 | \$2,411,807,837 | \$419,964,899 |
| 3,409,946,198 | \$6,223,791,226 | \$561,798,684 | \$10,049,846,113 | \$19,082,730,979 |

NEW DIRECTIONS IN PMP

Disaster Prevention, Mitigation, and Preparedness (PMP)

When a disaster strikes a developing country, disaster assistance organizations, including OFDA, focus on rescuing and treating survivors and restoring normal services as quickly as possible. OFDA also looks beyond the actual disaster and assists countries by designing and implementing measures for the prevention, mitigation, and preparedness of future disasters. Disasters will always occur, but by performing PMP activities, lives and economic and social assets are saved, and the cost for disaster recovery and rehabilitation is lowered.

Disaster *Prevention* activities are those “taken to prevent a natural phenomenon or potential hazard from having harmful effects on either persons or economic assets.” Some prevention activities are safely destroying outdated hazardous chemicals or building dams or berms to prevent flooding.

Disaster *Mitigation* “concentrates on reducing the harmful effects of a disaster.” While accepting that disasters will occur, mitigation projects, like installing hurricane straps to reduce wind damage to roofs, “limit their effects on human suffering and economic assets.”

Disaster *Preparedness* “aims to limit the impact of a disaster by structuring the response and providing quick and effective actions after the disaster.” By training their citizens and setting up early warning systems, developing countries use preparedness activities to reduce loss of lives. OFDA provides preparedness activities geared for both the pre-disaster and post-disaster phases.

In the past, PMP was a component of OFDA’s work, but now OFDA has placed greater emphasis on PMP, especially mitigation, as a means of enhancing A.I.D. development activities.

Rationale

The rationale behind this new emphasis (and the creation of a new PMP division within OFDA) is that without PMP measures in place, disasters will affect more lives, and years of development efforts and investment will be lost in minutes. Because the number and severity of disasters are rising each year, OFDA is

assisting with an increasing number of disasters. People in developing countries suffer the greatest impacts from disasters due to the often unsound construction and unsafe location of their homes, key public facilities, and infrastructural “lifelines”, as well as the degradation of the environment.

Through PMP measures, such as early warning systems and public awareness projects, death tolls are reduced when a catastrophe strikes. By implementing PMP activities, such as structural and non-structural mitigation measures, the effects of earthquakes, cyclonic storms, and other natural disasters can be alleviated. Since OFDA response is targeted on the most disaster-prone developing countries, PMP activities are cost-effective because lives are saved and development efforts are protected.

OFDA has, in fact, supported PMP initiatives since 1964. Several illustrative examples (in the box on the following page) of OFDA’s projects are provided. They are:

- Peru—La Punta Tsunami Study
- Latin America and Caribbean (LAC) Regional—OAS Risk Natural Hazards Project
- Global Agro-Climatic Impact Assessment
- LAC Disaster Management Training

History

Based on lessons learned during its early experience, several activities and changes led to the development of OFDA’s PMP Strategy:

- Increasing attention began to be placed on early warning systems, particularly following the Guatemala earthquake of 1976 and droughts in Africa and Haiti.
- New approaches to disaster mitigation in the housing sector also arose in the late 1970s.
- Beginning in the 1980s, a new emphasis was placed on a field-based approach, and the need to tailor programs to better meet the needs of the host country governments and professionals, particularly in preparedness training.

PAST OFDA PROJECTS

La Punta, Peru, Tsunami Study

The 1987 study of Peru's port city of Callao examined the natural hazards, especially tsunamis, present in that region and suggested long term mitigation efforts. Specifically, the project studied evacuation routes, practical inexpensive mitigation actions for the city of Callao, and public education actions that the Peruvian Civil Defense could implement.

Throughout the project period, data and suggestions were gathered from outside and within the Peruvian community. The mitigation efforts proposed, and in some instances enacted, by this study strengthened Peru's civil defense structure by involving them in the project development and implementation.

Global Agro-Climatic Impact Assessment

Between 1977 and 1985, OFDA supported both research and interpretation of satellite imagery of areas around the world to monitor weather and crop production. Data from the satellites were used to create data bases of historical information and show patterns in weather and agriculture.

Monthly assessments, based on this data, were provided to over 70 countries. While harvest predictions could be made on the ground, this system also enabled the forecasting of rains during the critical flowering and harvesting times.

This successful project provided useful and timely information to countries on their harvests. In 1985, with a new drought in the Sahel region of Africa, this preparedness project was transferred to the A.I.D. Africa Bureau, where its contribution continues.

LAC Regional—OAS Risk Natural Hazards Project

This mitigation and prevention project, begun in 1983, covers the entire region of Latin America and

the Caribbean Basin. A major objective of the project is to fully acquaint development planners with the natural hazards and risks in the region. With this knowledge, planners can promote safe development of these hazard-prone areas.

After first developing systems to examine the terrain and to track the locally available resources for disaster planning and response, disaster managers train participants to incorporate this information into their plans for the region or specific areas. Since the project began, national data bases have been developed, training courses and workshops have been conducted for over 215 people, and the hazard information has been used to create new building codes and urban settlement plans.

LAC Disaster Management Training

Since 1987, OFDA's Regional Advisors in Latin America have been actively involved in a comprehensive disaster management training program throughout the region. The aim of the program is to make disaster training into an ongoing activity, and to have Latin Americans teaching the courses, both on a national and regional basis. Phase I ran from 1987 to 1989 and consisted of an intensive "Train-the-Trainer" program. A cadre of up to 1,000 instructors and 90 Trainers of Trainers have been trained. Phase II of the program is the development of Disaster Management curricula and courses, following the same established pattern: Latin Americans developing their own courses and doing their own training.

Based on the success of the program in Central and Latin America, the program will be expanded to the Caribbean in 1992. Plans are also under way to initiate a regional training program for emergencies and disasters in Africa.

- OFDA also began, in the 1980s, to place higher priority on the need to prevent technological disasters.

PMP Strategy

In 1991, OFDA established a PMP Division in order to explicitly strengthen and give greater coherence to PMP activities within OFDA. As one of its first major tasks, the PMP Division developed a strategy document and the key elements of the five year strategy are summarized below.

Goals

The three major goals of the strategy are to:

1. Save the greatest number of lives, reduce human suffering, and protect economic assets from disasters.
2. Increase awareness of disasters and the possibilities for mitigation within A.I.D. development programs, together with those of other donors and the host countries themselves.
3. Ultimately, reduce resources spent on disaster response.

Components

To achieve these goals, the strategy has three components:

1. To integrate disaster PMP concerns into the programming mainstream of A.I.D.
2. To enhance the PMP impact to all A.I.D. resources that contribute to PMP.
3. To support stand-alone activities that fill PMP gaps in Mission programs or test new initiatives to meet strategy objectives.

Target Countries

In 1991, OFDA conducted a disaster vulnerability assessment. Based on the findings, target countries (see box) were identified as appropriate priorities for PMP initiatives. Criteria for target selection also included a determination by OFDA staff of future hazard vulnerability, host country capacity, and whether or not a country is a priority for A.I.D. development programs.

Specific locations and sectors which are most vulnerable will be further defined.

“A.I.D. investments at risk in PMP target countries could total an estimated \$6 billion over the five year period covered by the strategy.”

Up to 80% of PMP resources will be allocated to target countries; the remainder will support important initiatives outside these countries, plus other needs and opportunities resulting from future disasters.

Priority Sectors

To determine priority sectors, an analysis was conducted of disaster impacts and potential interventions. Priority was assigned to areas with high impact *and* a high likelihood that A.I.D. could address the problem.

Within the four PMP priority sectors of **Basic Facilities, Food Production, Health/Industry, and Disaster Management**, seven different types of disasters were identified. The seven different types of disaster are classified as famine, conflict, earthquakes, cyclones, floods, volcanoes, and technological disasters (e.g., release of poisonous gas). Basic Facilities are affected by earthquake, cyclones, and floods, while Food Production is affected by famine and conflict. The sector of Health/Industry is impacted by technological disasters, while Disaster Management is impacted by all types of disaster but technological.

Present and Future Directions

As guiding principles, PMP projects incorporate lessons learned from past projects and current priorities detailed in the PMP Strategy. Present PMP initiatives include an environmental program to prevent technological hazards; a regional disaster mitigation effort in the Caribbean; and development of a regional training program for Africa.

A new project developed by PMP is the Caribbean Disaster Management Project (CDMP). Through CDMP, Caribbean nations can access the resources needed to support mitigation efforts in the areas of urban infrastructure, “lifeline” facilities (e.g., hospitals), and shelter.

TARGET COUNTRIES

| <u>Latin America</u> | <u>Asia</u> | <u>Africa</u> |
|----------------------|-------------------|---------------|
| Caribbean Basin | Philippines | Ethiopia |
| Ecuador | Indonesia | Mozambique |
| Peru | Bangladesh | Somalia |
| Nicaragua | Fiji (S. Pacific) | Angola |
| El Salvador | Sri Lanka | Sahel Region |
| Guatemala | | Sudan |

The CDMP will use various NGOs, PVOs, and local institutions to create sustainable mechanisms for disaster mitigation for shelter and land management. Two methods of implementing disaster mitigation are stressed by CDMP: structural (actual building construction of structures), and non-structural (public policy enactment, such as hazard identification resulting in new building codes).

Another PMP project, under a Cooperative Agreement with the World Environment Center, involves prevention of technological hazards through safe handling of hazardous chemicals and preparedness training specific to technological disasters. Through the Local Accident Mitigation and Prevention (LAMP) programs, attention will focus on locations where the risks from technological hazards are highest due to either demographics or the status of industrial chemical handling procedures. The sites targeted in which to establish LAMP programs are in India, Thailand, Indonesia, and Mexico.

One means of information dissemination and institution building used in LAMP is through techniques such as the Awareness and Preparedness for Emergencies at the Local Level (APELL). This program was initiated by the U.N. Environmental Program and will be continued through LAMP.

Derived from the successful LAC training programs, a new initiative in Africa is working towards the same goals (e.g., improved awareness, performance, and coordination for disaster planning and response, and enhancement of host country and regional self reliance). Focusing on personnel involved in relief, PMP will use "Train-the-Trainers" techniques to achieve a multiplier

affect (i.e., the newly trained personnel can train more people).

The training will concentrate on three to four African countries at varying stages of disaster PMP development. The mix of countries will include those with long-term relief needs and those with capacity strengthening needs. Through the use of OFDA/PMP Regional Advisors, and locally developed training materials, the training programs will focus on the specific needs unique to the region or country.

PMP plans to chart its future in three main directions to attain maximum impact.

Integrate OFDA's work with other A.I.D. programs. By working with other A.I.D. Offices, PMP plans to positively effect design and implementation of A.I.D. development programs to include PMP approaches and thereby save lives and reduce loss of economic and social assets.

Concentrate resources on disaster mitigation over preparedness activities. While preparedness activities have been stressed in the past, analysis of experience to date suggests that OFDA can have a greater impact by focusing its resources on mitigation activities.

Stimulate demand for disaster mitigation through market mechanisms. OFDA has created an International Disaster Advisory Committee, chaired by Mrs. Marilyn Quayle, as a vehicle through which to engage the private sector in disaster preparedness and mitigation.

These new directions are based upon lessons learned from past experience. OFDA's PMP program will continue to evolve, as it has in the past, by continual evaluation of its program, and by seizing the most promising opportunities for saving lives and reducing social and economic losses in hazard prone countries of the developing world.

PRIOR-YEAR AND NON-DECLARED DISASTERS

In FY 1991, OFDA obligated a total of \$1,940,168 to continue funding relief and rehabilitation activities begun in prior fiscal years or to replace commodities drawn down from OFDA stockpiles for prior-year emergencies. Included also in this total are some Africa projects that were not country specific and were not declared disasters, as well as a contribution of \$110,000 from a Congressionally mandated orphan earmark for a project in Haiti. (Other contributions from the orphan earmark are described in "Angola Displaced Persons" and "Ethiopia Drought/Civil Strife" in this volume.) The Federal Emergency Management Agency (FEMA) will reimburse OFDA a total of \$994,316 for items used from the OFDA stockpiles for cyclones in Truk, Palau, Yap, and Guam, and Hurricane Hugo in St. Croix. Other USG offices also provided continuing assistance in some disasters. All funding obligations for prior-year or non-declared disasters are summarized below.

Africa Regional - Civil Strife (Non-Declared FY 1991)

OFDA provided a grant to Air Serv for the overhaul of two OFDA-owned Twin Otter aircraft used for the relief effort in Sudan and Ethiopia (\$215,000).

TOTAL **\$215,000**

Africa Regional - Insect Infestation (Non-Declared FY 1989)

Funds were provided to Litton Aero Products for additional equipment (\$10,000).

TOTAL **\$10,000**

Caribbean - Hurricane Hugo (FY 1989)

To replace stockpile items used in response to Hurricane Hugo, OFDA procured 16 3,000-gallon water tanks (\$31,392) and paid shipment costs of the tanks, 500 pairs of gloves, and five individual support kits (\$1,826).

TOTAL **\$33,218**

Cote d'Ivoire - Displaced Persons (FY 1990)

In response to the continuing emergency caused by the influx of Liberian refugees, RP provided \$371,805

through Africare for seeds and tools for refugees in Cote d'Ivoire. (see "West Africa - Civil Strife/ Displaced Persons" in this volume.)

Total Other USG **\$371,805**

TOTAL **\$371,805**

FEMA Reimbursement (FY 1991)

OFDA replaced in the Guam and Panama stockpiles, the following items used by the FEMA after cyclones in Truk, Palau, Yap, and Guam (FY 1991) and Hurricane Hugo in St. Croix (FY 1989): plastic sheeting, water containers and tanks, blankets, tents, and chain saws. The procurement and shipping costs (\$994,316) were to be reimbursed by FEMA.

TOTAL **\$0.0**

Guinea - Displaced Persons (FY 1990)

Continuing assistance to Guinea, in response to the needs of refugees from Liberia and Sierra Leone, RP provided \$63,528 through IRC to finance education services. (see "West Africa - Civil Strife/Displaced Persons" in this volume.)

Total Other USG **\$63,528**

TOTAL **\$63,528**

Haiti - Orphan Project (Non-Declared FY 1991)

OFDA provided \$110,000 to USAID/Haiti to fund the construction of an orphanage to house 50 children in Boucan Carre.

TOTAL **\$110,000**

Iran - Earthquake (FY 1990)

OFDA provided a grant to the ARC to cover remaining airlift costs (\$54,625), procured 40 3,000-gallon water tanks (\$78,480), and shipped the following replacement items to the Leghorn stockpile: 439 tents, four support

kits, 1,000 hard hats, 1,000 pairs of gloves, 10,000 masks, 160 water jugs, and 2,940 blankets (\$10,000).

TOTAL **\$143,105**

Jamaica - Hurricane (FY 1988)

Shipping costs to replace 3,960 five-gallon water containers to the Panama stockpile were paid out of FY 1991 accounts (\$1,138).

TOTAL **\$1,138**

Jordan - Displaced Persons (FY 1990)

OFDA funded shipping costs to replace 1,000 tents, eight tent repair kits, and 16,440 wool blankets to the Leghorn stockpile (\$30,000).

TOTAL **\$30,000**

Mexico - Floods (FY 1990)

For this disaster, declared in late FY 1990, the U.S. Ambassador's Authority was used for the purchase of household items for the disaster victims (\$25,000).

TOTAL **\$25,000**

Panama - Emergency (FY 1990)

OFDA paid shipping costs to replace 100 rolls of plastic sheeting (\$2,516), 1,000 blankets (\$1,200), and 250 pairs of gloves (\$62) to the Panama stockpile.

TOTAL **\$3,778**

Philippines - Earthquake (FY 1990)

OFDA paid shipping costs to replace 427 rolls of plastic sheeting, 6100 blankets, four support kits, 500 hard hats, 500 pairs of gloves, and 5,000 face masks to the Guam stockpile (\$18,700), as well as additional shipping costs for 102 rolls of plastic sheeting from the manufacturer

to Guam (\$3,985) and replacement and freight charges for 380 wool blankets (\$1,739).

TOTAL **\$24,424**

Sierra Leone - Displaced Persons (FY 1990)

Continuing assistance to Sierra Leone for the displaced persons emergency created by civil war in neighboring Liberia and in Sierra Leone itself, OFDA provided a total of \$1,294,982 in commodities and services in FY 1991. This included a two-person assessment team sent to Sierra Leone and Guinea (\$11,531 funded from disaster travel and program accounts). (see "West Africa - Civil Strife/Displaced Persons" for details of the USG contribution.)

TOTAL **\$1,294,982**

Somalia - Civil Strife (FY 1990)

OFDA funded the services of a contractor to coordinate PVO and donor responses (\$24,357). This disaster was redeclared on March 25, 1991 (see "Somalia - Civil Strife" under "FY 1991 Declared Disasters".)

TOTAL **\$24,357**

Soviet Union - Earthquake (FY 1989)

To replace stockpile items used in this disaster, OFDA purchased four 3,000-gallon water tanks (\$7,848) and paid shipping costs for 4,863 five-gallon water containers (\$2,000).

TOTAL **\$9,848**

Sri Lanka - Civil Strife (FY 1990)

OFDA funded the services of a contractor to assess continuing needs in Sri Lanka as a result of ongoing civil strife (\$15,318).

TOTAL **\$15,318**

FY 1991 Declared Disasters

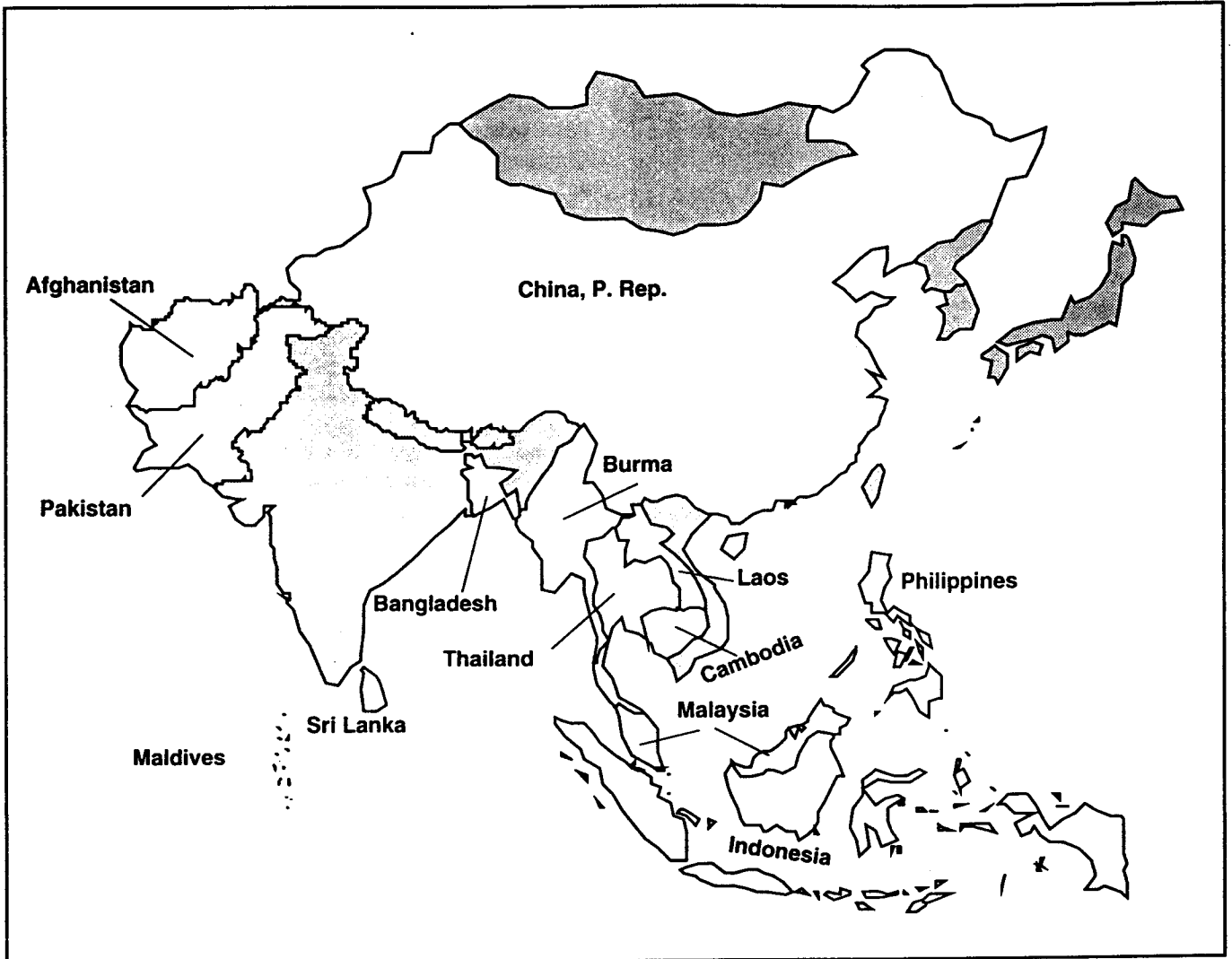
The case reports in this volume cover the period of the USG's fiscal year, Oct. 1, 1990, through Sept. 30, 1991. During FY 1991, OFDA responded to 62 new "declared" disasters—i.e., those in which the Chief of the U.S. Diplomatic Mission in an affected country determined that a disaster existed which warranted a U.S. response.

Many of the disasters required a complex mix of financial and staff resources. For those disasters which required considerably less OFDA resources, usually those declarations which were under \$200,000, a summary is included at the end of each regional section.

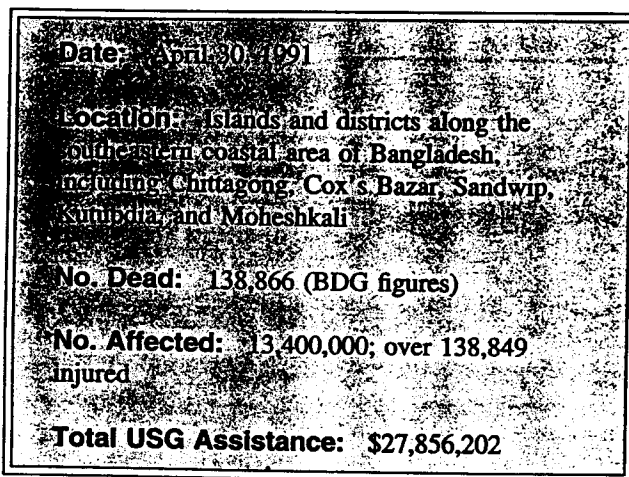
In the disaster case reports, the listings of assistance by the U.S. Voluntary Agencies and the International Community are compiled from reports submitted voluntarily to OFDA. It is not always possible to verify the accuracy of these reports nor the value of in-kind contributions. Accordingly, the total dollar values indicated should be taken as representative figures.

Asia

Asia and the Pacific



BANGLADESH - Cyclone



Date: April 30, 1991

Location: Islands and districts along the southeastern coastal area of Bangladesh, including Chittagong, Cox's Bazar, Sandwip, Kutubdia, and Moheshkali

No. Dead: 138,866 (BDG figures)

No. Affected: 13,400,000; over 138,849 injured

Total USG Assistance: \$27,856,202

The Disaster

Bangladesh has been the scene of some of the worst cyclone disasters ever recorded. Its generally flat terrain, high population density, and location at the head of the Bay of Bengal make it especially vulnerable to severe storms that often form in the Bay during the pre- and post-monsoon seasons. Historically, the greatest danger has been from the accompanying storm surges that inundate coastal areas and offshore islands, especially when they coincide with high tides. The deadliest cyclone to hit Bangladesh in modern times was on Nov. 12, 1970, which, with a storm surge of six to eight meters, claimed the lives of 300,000 to one million people.

The cyclone that swept across the southeastern coast of Bangladesh on April 30, 1991, did not reach the record set by the 1970 event for destruction of human life. Nevertheless, it will go down in the annals of world catastrophes as one of the worst rapid onset disasters of the late twentieth century. Cyclone Marian formed in the Bay over several days and crossed the Chittagong - Cox's Bazar coast near the Meghna estuary at about midnight, lashing the area with winds up to 210 km. per hour, gusting to 235 km. per hour. A storm surge of over six meters submerged coastal areas and small offshore islands (chars), causing massive loss of life and destruction.

The death toll mounted steadily as sea waters receded, uncovering more bodies. As of May 21, the official figure had reached 138,866, with the number of injured listed at 138,849. An FAO/WFP survey in June reported that about 13.4 million people lived in the affected

areas. Of those, some 1.255 million were in the most severely affected upazilas and Chittagong City, and another 1.835 million lived in badly affected areas in the immediate coastal belt. Four districts - Chittagong, Cox's Bazar, Noakhali, and Bhola - were the most heavily damaged. Nearly 80,000 people died in Chittagong, where the country's main port was wrecked and some 20 navy and cargo vessels sank. On Sandwip Island, in Chittagong District, some 35,000 people perished, 60% to 70% of houses were washed away, and 70% of crops were lost. Heavy loss of life was also reported in Cox's Bazar District. Government sources reported that from a pre-cyclone population of 110,000 on Kutubdia, an offshore island in Cox's Bazar District, 20,000 people died and 2,000 were missing. An aerial survey by USAID staff revealed that 80% to 90% of all structures were destroyed and all livestock lost on Kutubdia. Entire populations were wiped out on some of the smaller islands.

Many of the storm's survivors remained marooned without shelter or in overcrowded temporary shelters for days after the storm. Continuing rain and rough seas hampered rescue and relief efforts. The lack of a safe water supply and proper sanitation caused a dramatic rise in the incidence of diarrhea and dysentery, with as many as 300,000 possible diarrheal cases and up to 2,000 associated deaths during the first three weeks after the cyclone. A shortage of oral rehydration salts (ORS) and materials for local production delayed treatment of early cases.

Damage was widespread and severe in all sectors. According to government estimates, 780,000 homes were destroyed, and 9,300 schools and 655 health centers were damaged or destroyed. Power, water, and communications lines were cut to the affected areas, and train, road, and air service to Chittagong was disrupted. More than 190 km. of coastal embankments were destroyed and 940 km. were damaged. Numerous tubewells in the stricken area were damaged or contaminated. In many areas, surface water was salinized, including ponds used for bathing and cleaning. Almost all industries in the port area of Chittagong suffered heavy damage. The port itself was left in shambles, with numerous beachings and sinkings of vessels, damage to container facilities, and the loss of channel buoys and markers.

The agricultural sector sustained serious disruptions. The FAO/WFP survey reported that 247,000 tons of cereal crops, and 35,000 tons of vegetables, tubers, and other crops were lost. Although net "boro" rice crop losses from the ongoing harvest represented only about 1% of national production, prospects for the main "aman" crop (June - October) were less favorable because of the cyclone's damage to coastal embankments, high salinity in some areas, and a shortage of tools, seeds, and fertilizers. According to official estimates, 224,000 head of cattle, 218,000 goats, and 2.4 million head of poultry perished in the storm. Surviving livestock were in poor health and lacked sufficient feed. The massive loss of cattle represented a serious constraint to the cultivation of crops, since cattle are almost the only source of draught power.

Losses in the fisheries sector were equally calamitous, with extensive damage to 31,000 ha. of shrimp farms as well as to fish processing plants, vessels, and stocks. The forestry sector suffered considerable losses of fuel wood and timber, as well as damage to coastal mangrove plantations which increased the possibility of serious coastal erosion in the future. Estimated production losses totaled 15 million cubic feet of softwood and 3.3 million cubic feet of hardwood. The loss of income generating assets in all sectors (e.g., tools, boats, nets) and of agricultural employment were expected to be serious obstacles to the return to a prior means of livelihood for the affected population. The cost of reconstruction and rehabilitation was put at \$1.78 billion by a U.N. task force that investigated the cyclone's impact.

Action Taken by the Government of Bangladesh (BDG)

The Bangladesh Red Crescent's (BRC) Cyclone Preparedness Program was credited with saving many lives by issuing cyclone warnings and evacuating 350,000 people to storm shelters. NGOs and press corps members who visited the area after the storm reported that casualties were significantly lower in areas where people made use of existing cyclone shelters. The number of shelters was not adequate, however, for the number of people at risk. Many of the BRC volunteers in the program lost their own homes and possessions as well as some of the equipment essential to their trade, such as megaphones, signal lights, and transistor radios.

The early warning system for the country was established in the 1970s when a satellite ground station was put in place in Dhaka by the Bangladesh institution, the Space Research and Remote Sensing Organization. In 1978, OFDA provided funds to upgrade the system to Low Resolution Picture Transmission capability. Two years later, OFDA funded a further upgrade to High Resolution Picture Transmission capability. OFDA funding for this project, implemented by NASA, amounted to \$749,000. USAID has continued to provide financial assistance for this activity for a total of over \$6 million.

On April 30, Prime Minister Begum Kalida Zia flew over the devastated area and promptly issued an appeal for international assistance. An emergency committee headed by the Prime Minister was appointed, and a Prime Minister's Relief Fund was established. The Ministry of Relief and Rehabilitation was responsible for relief operations which were carried out from two main zones - Chittagong and Barisal. The External Relations Division (ERD) of the Ministry of Finance was designated as the contact point for international donors and assumed an overall coordinating role reinforced by interdepartmental links. The ERD Secretary convened a meeting of representatives of embassies and international organizations on May 7 to present an estimate of aid requirements. Local coordination cells comprising Bangladesh army units, the U.S. Task Force (see "Assistance Provided by the U.S. Government"), district administrators, and NGOs operated after May 18 to improve distribution of relief supplies and services. The BDG had allocated \$300 - \$400 million from its own resources as of July 16 for relief and rehabilitation.

The BDG's priorities, in the immediate aftermath of the storm, were providing victims access to clean water and food, and restoring communications to urban and rural areas. Military and civilian teams, under army coordination, were deployed to deliver food, clothing, and other relief items from government stocks. Food supplies were available in sufficient quantity in Bangladesh, the main causes of shortages being delivery problems and the loss of home stocks. Food and other essentials were airdropped or delivered by boat, but relief operations were initially hampered by a shortage of helicopters and speed boats to reach remote areas, and by continuing rain and rough seas. Flooding and

tornadoes in other areas of the country added to the difficulty of the BDG's response. As of May 13, the BDG had distributed 8,775 MT of rice, 5,100 MT of wheat, 2.7 million water purification tablets (WPT), and 4.7 million packets of ORS to cyclone victims. With U.S. military assistance, air and sea lifts were reaching all islands by May 20. Some 1,348 Bangladesh medical teams also were deployed to the stricken area to treat the sick and injured. The municipal Expanded Program of Immunization (EPI) began a measles campaign in Gazipur, Chittagong, and Cox's Bazar to forestall an epidemic.

The BDG quickly began the task of restoring vital services. By May 2, train, air, and road service to Chittagong had been restored. The government engineering bureau initiated a road rehabilitation program to reestablish accessibility to settlements cut off by the storm. By May 8, the Chittagong port was open to vessels of limited draft (seven meters instead of the normal eight and one half). Full recovery of the port, however, was expected to take as long as a year. With the help of UNICEF, the BDG Department of Public Health Engineering sank new tubewells and repaired existing ones, providing near universal access to tubewell water for all the affected population by May 20. By late May, international phone service and a trunkline between Dhaka and Chittagong had been restored, ferry service from Chittagong to offshore islands had resumed, and most industries in the port area had returned to at least limited production. Also, as an essential part of recovery, the BDG began a food-for-work program, initiated by WFP and executed by the Bangladesh Water Development Board, to repair and reconstruct embankments. The repair of protective embankments encouraged people who had fled offshore islands to return home. Despite a shortage of building resources in some areas, considerable repair and rebuilding of homes and shops got underway within weeks of the disaster. Only the very destitute remained in temporary shelters by the end of May.

Local NGOs also played a vital role in disaster relief. The BRC mobilized about 30,000 personnel and operated in all affected areas, providing food, shelter materials, WPTs, and ORS packets. The BRC targeted assistance to 300,000 people in 100 relief centers for 30 days. Bangladesh Rural Advancement Committee teams also provided food and relief goods and committed

about \$300,000 in cash and kind. The Christian Commission for Development in Bangladesh (CCDB) sent a survey team and provided food, clothing, WPTs, and other relief supplies. Rangpur Dinajpur Rural Service (RDRS), an NGO funded by international church donors, gave \$380,000, distributed 20 tons of local supplies, and delivered 180 tons of relief supplies that arrived on four chartered flights.

Assistance Provided by the U.S. Government

U.S. Ambassador William B. Milam issued a disaster declaration on April 30, releasing \$25,000 under his Disaster Assistance Authority to the Prime Minister's Relief Fund. Five USAID-funded NGOs dispatched staff to do a rapid assessment for USAID/Bangladesh. Ambassador Milam toured the Chittagong area on May 1.

USAID/Bangladesh had delivered 5,500 lbs. of DOD medical supplies, worth about \$2 million, to the Health Ministry the day before the cyclone struck. Additionally, 5.9 million sachets of ORS remaining from the 1988 flood response had been donated to UNICEF and other organizations three weeks earlier to combat diarrheal diseases, including cholera outbreaks. A USAID-sponsored project fielded surveillance teams to determine the prevalence of diarrheal disease.

Strongly supporting the BDG's priority to restore safe water supplies, USAID requested that OFDA provide an initial grant of \$100,000 to enable NGOs/PVOs to locally purchase water purifying agents (bleach and alum), ORS, and other relief items. The remaining USAID/Bangladesh stocks of WPTs, worth \$14,000, were disbursed to local governments and NGOs/PVOs. The International Center for Diarrheal Disease Research in Bangladesh increased its domestic production of ORS with funding from USAID to conduct 24-hour shifts. While Bangladesh does not produce WPTs, the country produces enough ORS to meet its needs under normal circumstances.

Subsequently, OFDA provided a total of \$4,025,452 in USAID/Bangladesh allotments to be used for grants to NGOs/PVOs for the provision of ORS, food, water purifying agents, health education, tubewell repair, emergency shelter materials, and other relief supplies and services. Grants were provided to CARE, SCF/US,

WVRD, the Asia Foundation, Pathfinder, HKI, and ICDDR. A portion of the funds (\$7,823) was used by USAID to purchase ORS packets from Pakistan. The health and nutritional surveillance component of the HKI project included frequent surveys of the nutritional status of cyclone victims, prices, and wages over the following few weeks to guide continuing interventions. Additionally, OFDA purchased four million WPTs from a manufacturer in Switzerland at a cost of \$512,000.

When the cyclone hit, a contingent of soldiers from the U.S. Army Corps of Engineers in Bangladesh was deployed to Chittagong to help rehabilitate the airport. On May 10, a DOD DC-5 aircraft arrived in Bangladesh from Saudi Arabia laden with food and medical supplies. On the same day, a DOD C-141 transported over 20 MT of medicine, clothing, and hand tools to Bangladesh from DOD stocks in Okinawa. Transport costs for the two airlifts came to \$500,000, and the commodities were valued at over \$2.5 million.

On May 13, a major DOD response got underway when a DOD transport plane arrived in Dhaka from Okinawa carrying five Army UH-60 Blackhawk helicopters, crews, military air traffic controllers, construction workers, and an environmental preventive medicine unit. This was followed by the arrival of a disaster relief force of nearly 8,000 military personnel diverted to Bangladesh while returning to the United States from the Persian Gulf. The 4,600 U.S. marines and 2,900 sailors who arrived May 15 aboard seven ships of a Navy amphibious group assisted with ferrying food and clothing by helicopter to the cyclone victims in inaccessible areas, and with water purification. The amphibious vessels also carried 28 helicopters and 10 landing craft that were used in the relief effort.

In carrying out "Operation Sea Angel," U.S. military C-130 flights transported personnel and supplies from Dhaka to Chittagong, where a support base had been established. As of June 8, helicopters, C-130s, and water craft had carried a total of 5,691 tons of relief supplies to about 1.7 million people. Relief items included water, food, plastic sheeting for shelter, water containers, storm lamps, cooking fuel, and preventive medicine. Six teams with communications, medical, and engineering expertise completed assessments in the hardest-hit areas, and military engineers constructed warehouses on Sandwip and Kutubdia, and repaired roads leading to

relief centers. Six water purification units and teams operated at Sandwip, Kutubdia, and Chittagong. The USS St. Louis arrived May 29 with 28 more water purification units and smaller landing craft. The preventive medicine unit, working with the local medical staff, set up a field laboratory and epidemiological surveillance center on Sandwip. The amphibious forces departed from the Bay of Bengal on May 29, and all other elements of the Joint Task Force had left by June 15. The activities of "Operation Sea Angel" were fully integrated into the BDG relief operation. Costs incurred by "Operation Sea Angel" were covered by Presidential authority (Section 506 A) which allows for the draw-down of articles and services from DOD stocks for disaster relief and rehabilitation. Additionally, DOD provided excess equipment from U.S. Army and U.S. Navy stocks, including radios, trucks, landing craft, and spare parts. The total draw-down amounted to \$14.3 million.

The USG funds a \$130 million annual program in development assistance in Bangladesh that has significantly enhanced disaster preparedness in the areas of health, hygiene, and food security. This includes a large P.L. 480 program from which up to 55,000 MT of wheat consigned to CARE was authorized for release for emergency feeding. CARE finally used 9,850 MT of the amount authorized; this contribution was valued at \$1,132,750 for the wheat, and \$738,750 for transport.

Mrs. Marilyn Tucker Quayle, chairman of A.I.D.'s International Disaster Advisory Committee, accompanied by OFDA Director Andrew Natsios, Deputy Assistant Administrator for the A.I.D. Asia Bureau George Laudato, and A.I.D./Bangladesh Desk Officer David Frederick, visited Bangladesh on May 21-23 to review the relief effort. They met with Prime Minister Khalida Zia, other BDG officials and relief personnel, and with U.S. military personnel.

To assist the rehabilitation effort, the A.I.D. Asia Bureau announced the provision of \$2 million above current FY 1991 funding to be used for rural electrification projects.

| | |
|--|---------------------|
| Ambassador's Authority | \$25,000 |
| Initial grants to PVOs | \$100,000 |
| Mission allotments for grants | \$4,025,452 |
| Purchase of WPTs..... | \$512,000 |
| Travel costs of Mrs. Quayle's team | \$8,250 |
| Medical supplies in-country (DOD) | \$2,000,000 |
| Airlifts of relief supplies and commodities (DOD)..... | \$3,000,000 |
| Value of "Operation Sea Angel" activities and DOD equipment (DOD) | \$14,300,000 |
| Water purification tablets (USAID)..... | \$ 14,000 |
| Funding for rural electrification (Asia Bureau) | \$2,000,000 |
| Value of 9,850 MT of P.L. 480 wheat (includes transport) (FFP)..... | \$1,871,500 |
| Total OFDA | \$4,670,702 |
| Total FFP..... | \$1,871,500 |
| Total DOD | \$19,300,000 |
| Total Other USG | \$2,014,000 |
| TOTAL | \$27,856,202 |

ADRA - established a feeding program for 20,000 cyclone victims, and had a medical team in Chittagong.

ARC - donated \$585,000 for relief and planned to contribute a further \$100,000 for rehabilitation activities.

WVRD - committed \$2,500,000 to provide food, clothing, medical supplies, tents, WPTs, and blankets to 25,000 families in Cox's Bazar and Chittagong. WVRD also planned rehabilitation assistance.

EC - pledged \$12,195,120 to procure 45,000 MT of wheat, 1,500 MT of vegoil, tents, and blankets. In May

and July, the EC announced further allocations of \$72,000,000 and \$30,000,000 for food, multi-purpose cyclone shelters, and technical assistance.

FAO - with WFP, conducted an assessment of agricultural damage. To support rehabilitation, FAO approved three emergency projects valued at \$800,000.

International Islamic Relief Organization - sent a relief team.

LRCS - issued an appeal and carried out a joint relief program with the BRC. LRCS provided \$100,000.

OPEC Fund/Vienna - contributed \$100,000 through UNDRO.

UNDP - made an emergency grant of \$50,000 and worked with the U.N. task force to identify priorities for immediate and post-emergency assistance, such as improved coordination, early warning systems, land use, and coastal protection.

UNDRO - gave \$50,000 and launched an appeal. The UNDRO director arrived in Bangladesh on May 5 to meet with BDG officials and conduct an assessment. UNDRO headed a U.N. task force to work with the BDG to formulate a report on medium- and long-term rehabilitation and reconstruction. The report, "The 1991 Cyclone in Bangladesh: Impact, Recovery, and Reconstruction," was presented at a meeting of the international community at U.N. Economic and Social Council headquarters in July.

UNICEF - issued an appeal and had implemented relief operations costing \$2,523,000 as of July 6, mainly in the area of health, water, and sanitation.

World Bank - at the BDG's request, convened a series of donor meetings to discuss reconstruction requirements and identify potential donors. A high priority was the construction of cyclone shelters, in view of reports of poor accessibility of shelters to the population affected by the April 30 cyclone.

WFP - allocated 21,000 MT of wheat and vegoil, partially valued at \$1,500,000, and, with FAO, assessed crop damage and food needs in early June. WFP operated a program for two million people for three

months and launched a food-for-work program to repair embankments in collaboration with the BDG.

WHO - sent an assessment team, and provided health kits for 480,000 people. WHO worked with the BDG Ministry of Health to coordinate medical assistance. Total allocation as of June 6 was \$650,000.

Governments

Australia - donated \$2,216,000 and pledged food aid.

Austria - provided \$164,000.

Burma - sent 500 MT of rice.

Canada - gave \$2,522,000 to the BRC, UNDRO, and Oxfam, as well as food.

China, People's Rep. - provided \$2,000,000 in aid, including tents, medical and food supplies, and helicopters.

Denmark - provided \$50,000.

Egypt - sent 85 MT of food and clothing.

France - provided \$86,000; 20,000 MT of wheat and powdered milk; and an additional \$520,000 for the local purchase of rice and plastic sheeting. France also assessed the electricity system in Barisal.

Germany - contributed a total of \$3,081,000.

India - provided \$700,000 and the loan of six helicopters, as well as an additional \$5,000,000 for relief in kind. India also sent 100,000 WPTs, bleaching powder, 5,000 MT of rice, and other items.

Iran - sent 90 MT of supplies.

Ireland - donated \$198,000 through UNDRO and Irish CONCERN.

Italy - allocated \$8,000,000 for the purchase of food, medicine, and medical supplies, and sent four helicopters and 40 army personnel to assist the relief effort.

Japan - contributed \$9,600,000, and sent two helicopters and a 50-person relief team.

Korea, Rep. - contributed \$100,000, and provided anhydrous glucose and foil needed for the manufacture of ORS in Bangladesh.

Nepal - gave \$100,000.

Netherlands - donated \$3,200,000 through LRCS and local NGOs, and pledged over \$5,000,000 to repair the Karnaphuli bridge.

New Zealand - donated \$5,120,000 through the EC and NGOs.

Norway - gave \$367,300 and financed the import of 22,500 MT of wheat by the BDG.

Pakistan - sent two helicopters, and donated \$4,515,000 in cash and \$1,670,000 worth of food and clothing.

Philippines - sent medicine.

Saudi Arabia - airlifted tents, blankets, and medicines and donated \$100,000,000 to the relief effort. In addition, Saudi Arabia made three C-130 planes available.

Sweden - approved a donation of \$3,461,000.

Switzerland - dispatched five delegates, including a communications expert, along with 36 MT of high protein food and tarpaulins. The Swiss contribution was partially valued at \$494,000.

Thailand - contributed \$75,000 and 5,000 MT of rice.

United Kingdom - donated a total of \$24,338,000 for emergency relief. The United Kingdom also provided two helicopters and a naval supply ship equipped with medical facilities.

Non-Governmental Organizations

CARE/Australia - sent 90 MT of relief goods, including food, blankets, and drugs to combat diarrhea and malaria.

Caritas International - donated \$422,300.

Corps Mondial Secours - dispatched a medical team and relief items.

Medecins du Monde (France) - set up a hospital in Cox's Bazar.

Oxfam/UK - distributed WPTs, food, candles, and matches from stocks already in country.

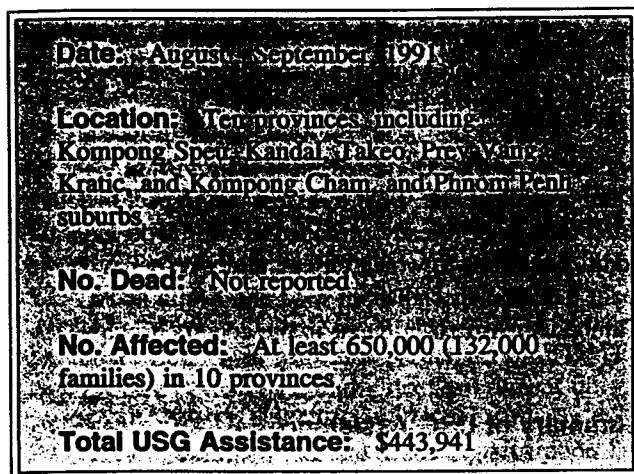
Red Cross and Red Crescent Societies - contributed at least \$4,719,719 (excludes ARC).

Secours Catholique - donated relief goods worth \$265,490.

South African Muslim Community - collected relief and medical supplies.

WCC - sent a team and supplies by chartered ship at a cost of \$650,000.

CAMBODIA - Floods



The Disaster

A weakened Typhoon Fred trailed over Cambodia in late August 1991, bringing several days of continuous, torrential rains that resulted in the worst flooding the country had experienced in 37 years. Compounding the situation was the flooding upstream in Laos that added to the water level in Cambodia's major rivers, especially the Mekong, Tonle Sap, and Tonle Bassac. Ten provinces crossed by these rivers were affected by the floods. Hardest hit were the provinces of Takeo, Kompong Speu, Kandal, Prey Vang, Kompong Cham, and Kratie, and the suburbs of the capital city of Phnom Penh. Hundreds of villages were inundated and many of them isolated by the rising flood waters. The Mekong River in Phnom Penh reached 10.8 meters on Sept. 10, passing the critical mark of 10.5 meters and causing widespread damage in the city of over one million inhabitants.

No official figure was released for the number of confirmed dead. Relief officials, however, estimated that the number could be over 100. The final assessment of flood damage reported by UNDRO in December indicated the following: 650,000 people in the 10 affected provinces in need of food aid; 3,000 homes totally destroyed; 243,000 ha. of rice fields flooded and 143,000 ha. of rice paddy destroyed; and massive livestock losses. Major damage to roads, bridges, irrigation structures, and other infrastructure was also reported.

Cambodia had experienced below average rainfall during the 10 years prior to the 1991 floods as well as three years of drought in the most severely affected

provinces. After 12 years of war and several years of drought, the health and welfare of the majority of flood victims was already in a precarious state before this latest disaster.

Action Taken by the Government of Cambodia and Non-Governmental Organizations

A ministry-level Health Committee for Flood Victims, formed in August, requested specific assistance to provide emergency drugs for 420,000 people for three months, as well as communications equipment, inflatable boats, and water systems equipment. On Aug. 23, the Minister of Foreign Affairs convened a meeting of NGOs and donor agencies operating in Cambodia to launch an appeal for emergency assistance. A formal request for international assistance was issued on Aug. 26. An appeal for humanitarian assistance was also issued by Prince Norodom Sihanouk, the country's hereditary monarch, who headed the Supreme National Council (SNC). *(Note: Subsequently, Prince Sihanouk was restored as head of state, after four rival factions agreed to a formal settlement on Oct. 23, 1991. The Phnom Penh government, in power at the time of this disaster and one of the rival factions, had been installed by invading Vietnamese in 1978. The three resistance factions included the Khmer Rouge communists who killed at least one million Cambodians during a four-year rule in the 1970s.)*

National authorities provided trucks and boats for relief and rescue operations, installed temporary bridges, and distributed food and medicine to the flood victims. As flooding threatened Phnom Penh, civilians were mobilized to sandbag key installations, including 15 km. of protective dikes and the Pochentong airport. Local NGOs and the U.N. system procured sandbags from neighboring Thailand and Vietnam. A group of local NGOs provided \$17,000 for the purchase of sandbags.

The Red Cross of Phnom Penh (RCPP) distributed rice provided by the WFP, as well as blankets, clothing, and medicine. RCPP first-aid workers offered medical assistance to flood victims, using UNICEF kits. With the support of LRCS, the RCPP planned to initially assist 200,000 people affected by the floods. *(Note: Each of the four military/political factions in Cambodia had an organization it referred to as the "Cambodian Red Cross". None of these organizations, however, was*

recognized by ICRC or LRCS at the time of this disaster, because none was an independent national organization. The RCPP, however, did have a staff and representatives in the provinces. Lacking any other indigenous humanitarian agency in Cambodia through which relief assistance could be channeled, the United Nations and donor governments supported the RCPP's relief efforts.)

As flood waters began to recede, a government post-flood assessment team was formed, comprising the ministers of agriculture, health, and transportation, and representatives of the United Nations, the Red Cross, and other NGOs. Government authorities worked with the U.N.-organized Flood Disaster Management Team (FDMT), which set up technical teams of experts to assess immediate, medium, and longer-term needs arising from the flood. Identified requirements included rice and rice seeds, building supplies, shelter kits, and vegetable seeds. The FDMT also recommended the establishment of a disease surveillance system and the stockpiling of emergency drugs and medicine for potential outbreaks of flood-related diseases.

Assistance Provided by the U.S. Government

The United States did not recognize the Phnom Penh regime as the legitimate government of Cambodia. However, in view of the magnitude of the disaster, which exceeded the ability of authorities and NGOs in Cambodia to respond, Acting Assistant Secretary of State for Asian and Pacific Affairs, Desaix Anderson, issued a disaster declaration on Aug. 26. He requested that OFDA determine the extent of the emergency and coordinate the appropriate response. He proposed that in response to Prince Sihanouk's appeal as SNC president, the USG extend assistance to one or more NGOs already operating in Cambodia.

On Aug. 30, OFDA arranged with DOD to transport 300 rolls of plastic sheeting (780,000 sq. ft.) to Phnom Penh from the Guam stockpile to be used for emergency shelter. (Note: To allow time for grommets and reinforced stitching to be added to the plastic sheets, OFDA plastic was exchanged for Oxfam plastic sheeting which had been earmarked for war displaced persons whose needs were less urgent than the flood victims. The OFDA plastic sheeting was reserved for later distribution.) OFDA also provided a grant to WVRD for

the purchase and transport of boats, motors, and survival kits. Distribution of the OFDA-provided commodities was carried out by the RCPP.

A three-person OFDA assessment team visited Cambodia from Oct. 6-20 to assess the impact of USG relief assistance already provided as well as to identify additional needs to which OFDA might respond. The team included specialists in food and health and a Cambodian-American fluent in the country's languages.

Summary of USG Assistance

FY 1991

| | |
|---|------------------|
| DOD airlift of 300 rolls of plastic | \$150,000 |
| Grant to WVRD | \$154,360 |
| Travel costs of three-person assessment team | \$46,982 |
| Total OFDA (FY 1991) | \$351,342 |

FY 1992

| | |
|--|-----------------|
| Replacement of 300 rolls of plastic to stockpile | \$84,480 |
| Shipment costs to replace plastic | \$8,119 |
| Total OFDA (FY 1992) | \$92,599 |

| | |
|--------------|------------------|
| TOTAL | \$443,941 |
|--------------|------------------|

Assistance Provided by U.S. Voluntary Agencies

American Friends Service Committee - gave \$28,700 for animal vaccination.

CARE - donated relief kits worth \$40,000.

CWS - purchased animal vaccines at a cost of \$150,000.

WVRD - with a program already in Cambodia, acted as the channel for USG assistance and facilitated the work of the OFDA assessment team. Additionally, WVRD provided \$192,000 for sandbags, survival kits, and agricultural inputs.

Assistance Provided by the International Community

International Organizations

The U.N. system worked with the Phnom Penh government and NGOs to assess needs and coordinate the donor response. The FDMT was formed, comprising representatives of UNDP, UNICEF, WFP, and the Office of the Special Representative of the Secretary-General in Bangkok (OSRSG). A representative of the Cambodian Council of Ministers participated in FDMT meetings (see "Action Taken by the Government of Cambodia".) WHO, UNICEF, and NGOs active in the health sector, identified medical needs in preparation for possible outbreaks of flood-related diseases.

EC - allocated 1,350 MT of cereals, worth \$242,000, for the relief effort, designated specifically for 2,500 flood victims in Takeo Province.

ICRC - provided drugs to the Swiss Red Cross delegation operating in Takeo provincial hospital, and set up a radio network between Phnom Penh and Kompong.

LRCS - to support relief activities of the RCPP, issued an appeal to national societies on Aug. 28. A League delegation conducted an assessment jointly with the RCPP, and LRCS released \$13,600 for emergency purchases and 4,000 blankets from its stockpile in Singapore. Additionally, LRCS channeled \$471,000 for the purchase of sandbags, survival kits, and food.

UNDP - donated 10,000 emergency kits and rice seeds, all valued at \$50,000.

UNDRO - dispatched a delegate at a cost of \$3,000 and gave \$20,000 for survival kits.

UNICEF - provided potable water, sandbags, medicine, and rice seeds, with a total value of \$175,000.

OSRSG (Bangkok) - allocated \$190,000, including purchase and transport of sandbags.

WFP - provided 1,000 MT of food, worth \$416,000.

WHO - donated medicine worth \$5,000.

Governments

Australia - provided relief kits, sandbags, and transport, all at a cost of \$183,000; \$785,000 for the purchase and shipment of 1,750 MT of rice to be distributed by WFP; \$78,500 worth of rice seedlings through two Australian NGOs; and over \$1,000,000 for the purchase and transport to Cambodia of 1,400 MT of Bailey bridging materials.

Denmark - gave \$74,000.

France - purchased survival kits worth \$30,000.

Germany - gave medicine valued at \$30,000.

Japan - donated relief items worth \$75,000 and paid transport costs of \$35,000.

Netherlands - provided \$200,000 worth of rice seeds.

Norway - sent food, medicine, and clothes, all valued at \$117,300.

Thailand - sent sandbags and relief items worth \$400,000.

United Kingdom - donated \$50,000 through UNDRO and relief kits valued at \$251,000.

Non-Governmental Organizations

ACR - provided agricultural inputs worth \$187,500.

Caritas - gave relief items worth \$24,000.

CIDSE - paid for sandbags and agricultural inputs valued at \$30,300.

CONCERN (Ireland) - provided sandbags and survival kits worth \$29,000.

LWF - provided \$120,000 worth of sandbags, seeds, and seedlings.

Oxfam (UK) - donated \$127,000 for sandbags and survival kits.

Redd Barna (Norway) - provided \$25,000 for sandbags and survival kits.

SCF/Australia - donated \$13,000 worth of sandbags.

Thailand Red Cross - gave relief items worth \$8,500.

WCC - contributed \$36,000 worth of sandbags,
seedlings, and seeds.

LAOS - Floods

| | |
|------------------------------|---|
| Date: | September 1991 |
| Location: | Southern provinces of Khammouane, Savannakhet, and Champassak |
| No. Dead: | None reported |
| No. Affected: | 332,000 |
| Total USG Assistance: | \$1,593,651 |

The Disaster

Heavy seasonal rainfall created severe flooding conditions in southern Laos in September 1991. The water level in the southern Mekong River was reported to have risen three-and-a-half meters above normal. Hardest hit were the provinces of Khammouane, Savannakhet, and Champassak. Paddy fields were submerged over 1.8 meters for several days in some areas. Flood damage to agriculture, combined with earlier crop losses from drought and insect pests, was expected to result in a shortfall of over 300,000 MT in rice production for the 1991-92 season. Later estimates reduced the total deficit to about 177,000 MT. Some 332,000 people in farm families suffered major losses due to the floods.

Authorities also feared an increase in the incidence of typhoid, cholera, malaria, and dysentery as flood waters receded. A survey by the FAO resident representative observed a dangerous lack of medicine to treat such ailments should they occur.

Action Taken by the Government of Laos (GOL)

The GOL alerted external donors and began mitigative measures to counteract the effects of the drought in the south and the Vientiane Plain. Following the flood disaster in the southern provinces, the GOL fielded an assessment team and facilitated the further assessment of the flood- and drought-affected areas by teams from OFDA and FAO. An official GOL escort accompanied the OFDA and FAO teams on their survey missions.

Assistance Provided by the U.S. Government

Based on reports that an urgent need for medicine was expected in the wake of the floods, U.S. Charge

d'Affaires Charles B. Salmon issued a disaster declaration on Sept. 10 and donated \$25,000 under his Ambassador's Authority to the Lao Red Cross. The funds were used for the purchase of medicine to treat flood-related diseases in the provinces of Khammouane, Savannakhet, and Champassak.

In October, OFDA assembled a five-person team to travel to Laos to assess immediate relief needs and the longer-term requirements for mitigating the effects of future flood and drought disasters. The team was led by OFDA Deputy Director Dayton Maxwell, and consisted of specialists in agriculture, health, food, and rural development. Four members of the team were fluent in Lao.

The team met with GOL officials, interviewed farmers and rice merchants, and visited five sites of flood damage in Savannakhet, Champassak, and Khammouane from Oct. 12-19, joining an FAO/WFP assessment team at one site. The team concluded that the population submitted inflated requests to the government. The resulting credibility gap contributed to the government's inability to estimate the real emergency needs that went beyond the normal ability of the population to cope and adjust to the frequent floods and droughts. Following the on-site assessments, the USG agreed to contribute to an initial WFP emergency operation to distribute 8,000 MT of rice to 166,000 farmers most severely affected by floods in southern Laos.

WFP provided vegoil to the WFP program in India to offset WFP purchasing 4,000 MT of rice in Thailand for the Lao emergency program. The cost of the rice, internal transportation, and a WFP team to assist with distribution, monitoring, and reporting amounted to \$1,192,400 from FY 1992 accounts.

As a result of an FAO report completed prior to the emergency period, which concluded that the rice deficit is a structural problem and will result in a probable shortfall in food production in Laos for the rest of the decade, the OFDA team further recommended that the USG support the development of a contingency planning capability in Laos to be used in future shortages. In response to the team's recommendation, OFDA provided a grant for \$357,494 to WVRD for a famine mitigation relief project. The activity provided for public works projects that would enable 1,000 households to

supplement family diet for three months during the off-season in 1992. The projects would also provide specific relief inputs, such as rice seed, draft animals, supplementary foods, and various nutrition and health-related contributions to reduce the incidence of illness and death resulting from diarrhea, respiratory infections, and malaria. Funding for the WVRD grant came from FY 1992 accounts, as well as travel costs of the OFDA team which amounted to \$18,157 (from disaster travel funds). OFDA also funded the in-country travel of the UNDP representative in Laos who accompanied the team on its assessment mission.

| | |
|-----------------------------------|--------------------|
| <i>Total OFDA (FY 1991)</i> | <i>\$25,000</i> |
| <i>Total OFDA (FY 1992)</i> | <i>\$376,251</i> |
| <i>Total FFP (FY 1992)</i> | <i>\$1,192,400</i> |
| TOTAL | \$1,593,651 |

Assistance Provided by the International Community

Australia - contributed 1,500 MT of rice, worth about \$396,000, to the WFP program.

EC - donated 2,500 MT of rice to the WFP emergency operation.

FAO/WFP - conducted assessments in Laos to determine emergency food requirements in the flood-and drought-affected areas and to project agricultural production figures for the rest of the decade. WFP carried out an emergency program to distribute 8,000 MT of rice to 166,000 severely affected farmers.

MALDIVES - Storm

| | |
|-----------------------|------------------------------|
| Date: | May 29, June 1, 1980 |
| Location: | Northern and southern atolls |
| No. Dead: | None reported |
| No. Affected: | 23,840 homeless |
| Total USG Assistance: | \$49,357 |

The Disaster

At the end of May, a violent windstorm accompanied by heavy rains swept the islands of the Republic of Maldives causing immense destruction, especially in the northern and southernmost atolls. The 1,190 small coral islands, clustered into atolls that form the Maldives, are low-lying and vulnerable to storms, but have been spared by regional cyclones in recent years. This year, however, gusting winds destroyed houses throughout the republic, leaving an estimated 23,840 homeless.

The national meteorological station in Male, the capital city, received some warning of the impending storm through satellite photographs, which indicated an unusual density of clouds and some circular patterns. Despite the station's issue of a preliminary warning to government officials, it only became evident at 11:00 p.m. on May 29 that the storm was potentially destructive. By then, attempts to warn the general population were largely ineffective as the national television and radio had ceased operations for the night. In Gan, the southernmost island, the full force of the storm hit at about 2:00 a.m. on May 30, blowing the roof off the local meteorological station. At that time, wind detection instruments registered winds of at least 90 knots, the highest winds ever recorded in the Maldives.

No deaths were reported among the total population of 220,000 who inhabit 280 islands. The winds, however, destroyed houses and crops, primarily in Addu Atoll along with three other southern atolls and three northern atolls. Gales of wind and rain continued to rage over the 500-mile atoll chain for several days, hampering relief efforts and accurate assessments. Over 3,400 houses were severely damaged and the storm uprooted hundreds

of thousands of trees, destroying over 30,850 timber trees, and almost 152,000 plantain trees, a major cash crop. The fishing sector (fish is a major source of protein in the Maldivian diet) was momentarily disrupted during the hiatus of activity surrounding the storm, but resumed shortly thereafter.

Action Taken by the Government of the Republic of Maldives (GORM)

On June 1, the GORM formed a disaster relief committee to respond to the storm. Officials in all inhabited islands were asked to develop detailed damage reports, and acting on the information provided, the committee established priorities for donations and distribution of relief food, medical supplies, and shelter. The disaster relief committee provided cash grants to those affected by the storm as reimbursement for damaged homes, crops (primarily plantain and other fruit trees), and boats. The Ministry of Foreign Affairs contacted potential donors by phone, canvassing the donor community for interest, and followed the calls with formal requests for assistance.

Assistance Provided by the U.S. Government

On June 5, a USAID representative from Colombo, Sri Lanka, traveled to Male to join the U.N. Disaster Response Committee for an on-site assessment of affected areas by helicopter. The helicopter was provided by the Maldivian Ministry of Foreign Affairs. The joint assessment report was used by other international donors to determine levels of adequate assistance.

On June 7, Charge d'Affaires Donald B. Westmore determined that a disaster situation existed in the Maldives, and released his Ambassador's Authority fund. OFDA channeled \$25,000 through the UNDP trust fund for the Maldives to rehabilitate existing shelter for victims of the storms and surges. OFDA later allocated an additional \$275,000 for rehabilitation of damaged housing in affected islands, and recommended that storm resistant techniques be used in the rebuilding process. In November, OFDA sent a team from INTERTECT to study the need for various disaster preparedness measures and to make recommendations to the GORM and USAID/Colombo on the most effective actions and

alternatives. The INTERTECT team's travel expenses amounted to \$19,357, from FY 1992 accounts.

TOTAL \$319,357

Assistance Provided by the International Community

International Organizations

FAO - provided technical assistance valued at \$125,000.

UNICEF - gave a \$25,000 grant towards medical lab equipment for mothers and children.

UNDP - established a trust fund for housing rehabilitation throughout the republic, and contributed \$50,000.

UNDRO - donated \$20,000.

WHO - provided five emergency health kits, each covering the needs of 1,000 people for three months.

Governments

Australia - contributed \$100,000 to the UNDP housing rehabilitation fund.

Canada - donated \$10,000 to the UNDP housing rehabilitation fund.

France - gave \$24,500 to the UNDP housing rehabilitation fund.

Germany - allocated \$277,420 to the UNDP housing rehabilitation fund.

India - contributed medicine, 1,000 MT of rice, 800 MT of sugar, and 800 MT of flour. The Government of India also provided two transport planes, two helicopters, and one naval ship for use in relief operations. The total value of all contributions was \$1,213,592.

Japan - provided \$20,000 to the UNDP housing rehabilitation fund.

Norway - contributed \$30,000 to the UNDP housing rehabilitation fund.

Pakistan - donated sugar, flour, medicine, and building materials, with a total value of \$434,783 (including transportation).

Sri Lanka - gave 1,000 kg. of tea leaves, corrugated roofing sheets, coconut rafters, and plantation seedlings.

United Kingdom - provided \$78,500.

PEOPLE'S REPUBLIC OF CHINA - Flood

| | |
|------------------------------|--|
| Date: | May-July 1991 |
| Location: | Anhui, Jiangsu, and Henan provinces were primarily affected. |
| No. Dead: | 2,470 |
| No. Affected: | 320 million, with 13.2 million seriously affected. |
| Total USG Assistance: | \$75,000 |

The Disaster

Torrential rains that began on May 18 caused massive flooding in eastern China. A series of downpours generated flooding of the Yangtze River and its tributaries, and heaped over 1.54 meters of water on the provinces of Anhui, Jiangsu, and Henan, causing immense devastation to the lives and properties of local residents. Reports indicated that 15 other provinces were also affected by the floods.

The Government of the People's Republic of China (GPRC) reported the total death toll at 2,470 as of Aug. 14, with an affected population of 320 million. Inundations injured almost 24,000 and forced the evacuation of at least 13.9 million people. The flood contaminated the water supply in the region, causing an increased incidence of water-borne diseases. In affected areas, up to 25% of the population reportedly suffered from dysentery and malaria. Poor environmental and food hygiene conditions led to an increased hepatitis occurrence.

Floods knocked out the power and water supply in many provinces and caused extensive damage to industrial and commercial enterprises, road and communications infrastructure, and irrigation systems. According to GPRC estimates, 2.1 million houses collapsed, and an additional 4.1 million houses, along with 1,800 hospitals, were damaged. Over 1,000 km. of roads were washed away, rendering communication and travel difficult. By mid-July, the main Beijing-Shanghai railroad line was functioning normally. Economic loss was estimated at \$7.5 billion, with much of the loss coming from the over 19.3 million ha. of agricultural crops totally or partially destroyed by the floods. This led to a prospective loss of 13.2 million MT of grain.

Existing flood waters were expected to delay planting of autumn crops. In Anhui, an important grain producing province and the area worst hit by the floods, over 80% of cropland was covered by flood waters. About two million MT of grain was lost in Jiangsu Province. Significant damage was also reported in neighboring provinces of Hubei, Sichuan, Zhejiang, Guizhou, and Hunan, with Hubei reporting 17 counties under water. Floods also wreaked havoc in the northeastern provinces of Heilongjiang and Jilin, where hundreds of villages were reportedly damaged or underwater, at least 106 people were killed, and over 60,000 houses were destroyed.

Action taken by the Government of the People's Republic of China

In response to the severe flooding, the GPRC launched an appeal for international assistance. The General Secretary of the Communist Party of China, Jiang Zeming, the Prime Minister, Li Peng, and other officials visited the disaster area to inspect the damage, provide guidance to relief workers, and express sympathy to victims. Local and central governments in Anhui and Jiangsu provinces provided more than \$75 million in disaster relief funds, and over 700,000 MT of relief goods and materials. The Chinese army, the Chinese Red Cross, and other local relief organizations were mobilized to combat floods, build dikes, drain flood waters, and deliver relief assistance. The People's Liberation Army and the China Armed Police deployed 360,000 troops, who worked with local citizens to provide relief. An additional 58 medical teams were dispatched to Anhui for relief and disease control, and over 80,000 medical workers were sent to fight the spread of water-borne diseases in the most affected areas.

Assistance provided by the U.S. Government

On June 28, U.S. Charge d'Affaires, B. Lynn Pascoe, declared that the floods constituted a disaster and released \$25,000 to the UNDP emergency relief project for flood disaster victims in Anhui Province. OFDA contributed \$100,000 to MSF/France who worked with UNICEF to provide emergency medical assistance, potable water, and emergency shelter in affected areas. OFDA also contributed \$400,000 directly to UNICEF to be used in Anhui, Henan, and Hubei provinces to

procure and restock 12 township-and village-level maternal and child health clinics with essential drugs. DOD donated and airlifted 70 tons of blankets worth about \$260,000. The blankets arrived in Shanghai on Aug. 9.

Summary of USG Assistance

| | |
|--------------------------------------|------------------|
| Ambassador's Authority (OFDA) | \$25,000 |
| Grant to MSF/France (OFDA) | \$100,000 |
| Grant to UNICEF (OFDA) | \$400,000 |
| Airlift 70 tons blankets (DOD) | \$260,000 |
| TOTAL | \$785,000 |

Assistance Provided by U.S. Voluntary Agencies

AmeriCares - chartered a flight to carry food, medicine and nutritional supplements, donated by a number of U.S. corporations, to flood victims in Anhui and Jiangsu provinces. The relief supplies were turned over to the All China Women's Federation and the China Children and Teenagers' Fund for distribution.

CWS - contributed \$5,000 through the Amity Foundation.

WVRD - provided \$605,560.

Assistance Provided by the International Community

International Organizations

EC - donated \$571,428 for tents, medicine, disinfectants, and food.

FAO - contributed \$400,000 for agricultural rehabilitation.

LRCS - worked with the China Red Cross to assess needs and conduct relief activities.

UNDP - gave \$50,000 and worked with UNDRO to coordinate international funds to provide medicine, water purification facilities, bleaching powder, tents,

blankets, and building materials for temporary shelters for flood stricken areas.

UNDRO - contributed \$20,000.

UNHCR - gave \$50,000.

UNICEF - donated \$25,000 to provide medicine for children affected by the floods.

WHO - approved a donation of \$15,000 for the local procurement of medical supplies and water purification facilities.

Governments

Australia - gave \$234,000 to UNDP to purchase medicine and building materials. The State of Victoria contributed \$78,000 to Jiangsu.

Burma - contributed 1,500 MT of rice.

Canada - contributed \$87,719 through UNDRO and \$87,719 through the LRCS. A Canadian private organization donated 18,000 blankets.

Denmark - donated \$20,000.

Finland - gave \$46,948.

Germany - donated \$277,778 through UNDRO and provided 4,700 MT of rice.

Hong Kong - contributed \$83,500,000.

Italy - provided \$374,531 through UNDRO.

Japan - provided \$300,000, as well as 3,780 blankets, 25,000 water purification doses, and two sets of medical instruments, all valued at \$172,059.

Korea, Dem. People's Rep. - gave 20,000 MT of cement.

Netherlands - donated \$49,504.

New Zealand - gave \$28,901.

Norway - contributed \$281,936.

Pakistan - donated 5,000 MT of rice.

Spain - provided 250 tents, 2,500 kg. medicine, and 10,000 water purification pills totaling \$353,982 including delivery costs.

Thailand - gave disaster relief goods valued at \$200,000 and 100,000 MT of rice.

United Kingdom - donated \$100,000 and provided \$20,000 for an UNDRO delegate.

Non-Governmental Organizations

MSF/France - conducted relief operations in affected areas.

Red Cross societies from Australia, Austria, Canada, Finland, Japan, Germany, Iceland, Korea, Rep., and Switzerland contributed a total of \$604,770.

PHILIPPINES - Typhoon

Date: Nov. 12-13, 1990

Location: Visayan Islands and northern Mindanao

No. Dead: 503; 240 missing

No. Affected: 1,009,655 families (about 5,048,275 people); 222,004 families homeless; 1,274 injured

Total USG Assistance: \$523,361

The Disaster

The strongest typhoon to hit the Philippines in the 1990 season bore down on the country's central islands on Nov. 12-13 with sustained maximum winds of over 250 km. per hour. Typhoon Ruping (international code name Mike) left a path of destruction as it swept across Samar, Leyte, Cebu, Negros, and Panay Islands in the Visayas, and Cagayan de Oro Province in northern Mindanao. According to a USAID assessment, the following provinces were the most seriously affected: Iloilo in Region 6, including Iloilo City and Guimaras; Negros Occidental in Region 6, including Bacolod and Silay cities; Cebu in Region 7, including Cebu City; and Northern and Southern Leyte Provinces in Region 8, including Tacloban and Ormoc cities. Cebu City, the country's second most important industrial center, was hit full force by the storm and sustained severe damage.

The death toll mounted as reports from areas cut off by the storm finally reached Manila. The final count was 503 dead, 240 missing, and 1,274 injured. At least 17 of the dead were caught in a mudslide in Negros Occidental. The homeless numbered some 1.1 million, as the storm destroyed 222,004 homes and seriously damaged another 630,885 dwellings. By GOP estimates, more than five million people were affected by the typhoon's strong winds and storm-generated flooding.

The storm knocked out power and communications lines in nearly all the affected areas and washed out roads and bridges. The media reported that 77 cargo and passenger vessels sank at the height of the storm, many of them moored at the Cebu wharf. A commercial vessel slammed into the bridge connecting Cebu City and Mactan Island (where the airport is located). The

agricultural sector suffered a serious blow from the large loss of livestock and damage to maturing crops. Total damage to the infrastructure was estimated by the GOP at approximately \$720 million.

Action Taken by the Government of the Philippines (GOP) and Non-Governmental Organizations

President Corazon Aquino declared 30 provinces in Regions 4, 5, 6, 7, 8, 10, and 11 to be calamity areas, giving them priority for relief and rehabilitation efforts, while also mobilizing all GOP departments and agencies concerned with disaster relief. The National Disaster Coordinating Council (NDCC), under the Department of Defense, monitored relief operations, and local disaster relief councils were put on alert. The Philippine National Red Cross (PNRC) and the Department of Social Welfare and Development (DSWD) were joined by units of the armed forces in assisting the relief effort. The Secretary of Defense ordered the airlift of 150 tents from armed services supplies into five affected cities.

The PNRC and other local NGOs set up evacuation centers to shelter thousands of storm victims who had been forced to flee from their homes. Red Cross workers in Iloilo rescued crewmen from storm-battered boats, and their counterparts in Suragao del Norte helped with the evacuation of people residing along coastal areas before the typhoon struck. The PNRC coordinated with the NDCC for the airlift of relief supplies to stricken areas, and sent two truckloads of supplies from national headquarters to the Bicol and eastern Visayas in preparation for the typhoon.

Government agencies, the military, and private groups responded promptly to the needs of the storm victims. The GOP Department of Health sent 5,500 lbs. of assorted drugs and medicines to Iloilo City for distribution to provincial health offices in affected provinces. The DSWD airlifted relief goods, consisting of food, clothing, and flashlights, to the cities of Dumaguete, Cebu, Tacloban, Iloilo, Bacolod, and Roxas, and to the province of Palawan, coordinating with local government units and NGOs in stricken areas. The Philippine air force airlifted at least 443,500 lbs. of relief supplies from the PNRC, the DSWD, and the Bigay Puso Foundation to affected areas. The Philippine navy sent ships laden with relief goods to typhoon-

ravaged provinces. As of Nov. 28, President Aquino had authorized the release of \$3.83 million in assistance to line agencies involved in disaster operations, and to local government units for ongoing relief in their respective areas. By Dec. 3, more than 470,000 families had been provided with emergency supplies by government agencies and the PNRC. Local newspapers, television and radio stations, and local civic organizations raised an additional total of \$178,500 for typhoon relief.

Assistance Provided by the U.S. Government

Upon hearing reports from the U.S. Consulate in Cebu City of the magnitude of the storm's destruction, U.S. Ambassador Nicholas Platt declared a disaster on Nov. 14 and released \$25,000 under his Disaster Assistance Authority to the PNRC for immediate relief needs.

A plane from the Embassy defense attache's office flew to Cebu on Nov. 15, carrying communications equipment, personnel, and other supplies from USAID to do an assessment. Subic Naval Base also sent an aircraft to Cebu with a team of six engineers and a salvage expert to assess damage in Cebu and recommend appropriate U.S. military assistance. A U.S. Air Force plane from Clark AFB flew over northern Mindanao and the Visayas on Nov. 15 to determine the extent of damage to areas other than Cebu.

At the request of USAID/Manila, OFDA provided \$150,000 to the Mission on Nov. 19 for the local procurement of shelter materials, cotton blankets, clothing, water containers, and food, as well as for the transportation and distribution costs of these items. The local NGOs working with USAID purchased local building supplies (nipa shingles, sawali mats, and coco lumber) when available. However, since extensive storm damage to such materials had driven up their cost, USAID/Manila recommended that OFDA make available plastic sheeting as supplementary shelter for the homeless. OFDA arranged with DOD to transport 325 rolls of plastic sheeting (845,000 sq. ft.) from the Guam stockpile to the Philippines.

USAID signed the following grants with four local NGOs from the \$150,000 made available by OFDA: (1) the Philippine Business for Social Progress worked through partner organizations in Antique, Iloilo, and

Southern Leyte, distributing food, indigenous shelter materials and OFDA plastic sheeting; (2) the Ramon Aboitiz Foundation, Inc., provided relief supplies to 3,135 families in Cebu City; (3) the Negros Economic Development Fund used its USAID grant to procure and distribute water containers and shelter materials to 4,994 families in Bacolod, Negros Occidental; and (4) Kauswagan Victorias Foundation distributed food and relief items to 3,034 families.

As further assistance to the rehabilitation effort, OFDA funded the cost of deployment and support of U.S. Navy electricity transmission repair teams from the "U.S.S. Duluth" for 14 days to help restore power to Cebu City.

To make food available for emergency distribution, USAID authorized the release of P.L. 480 Title II food (corn, soya blend, and bulgur wheat), valued at \$570,913, from PVO regular program stocks.

Summary of USG Assistance

| | |
|---|------------------|
| Ambassador's Authority | \$25,000 |
| DOD airlift of plastic sheeting | \$83,000 |
| Partial replacement of 325 rolls of plastic sheeting..... | \$59,361 |
| OFDA allotment to USAID/Manila for local procurement of relief supplies | \$150,000 |
| OFDA allotment to USAID/Manila for the deployment of power line teams | \$69,000 |
| Value of P.L. 480 Title II food | \$570,913 |
| Total OFDA | \$386,361 |
| Total FFP..... | \$570,913 |
| TOTAL | \$957,274 |

Assistance Provided by U.S. Voluntary Agencies
ARC - gave \$100,000 to the PNRC for typhoon relief.

CARE - distributed food and blankets to the typhoon victims.

Christian Children's Fund - sent \$150,000 to its office in the Philippines for affiliate projects.

CRS - provided \$25,000 as an initial contribution to the relief effort and also distributed tents, blankets, medicine, and P.L. 480 food from its regular program stocks.

SCF - assisted in evacuation efforts on the Island of Panay and donated \$10,000.

WVRD - gave \$40,000 for relief assistance.

Caritas/Italy - gave \$8,800.

Caritas/Netherlands - contributed \$59,200.

LWF - provided \$15,000.

Secours Catholique Francais - donated \$49,240.

Assistance Provided by the International Community

International Organizations

LRCS - channeled \$153,850 donated by Red Cross and Red Crescent societies to the PNRC.

UNDRO - gave an emergency grant of \$20,000.

UNDP - donated \$50,000 worth of relief supplies.

UNICEF - provided water purification tablets and other medical supplies worth \$28,710.

Governments

Belgium - donated \$90,252 to Cebu and carried out a project to construct the Pasil fishing port in the city.

Denmark - contributed \$25,950.

Germany - gave tents and medicine valued at \$132,450.

Japan - donated \$400,000 for rehabilitation and reconstruction.

Sweden - gave \$17,950 worth of relief items.

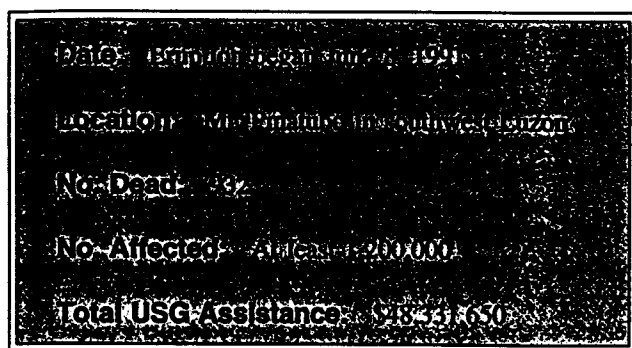
United Kingdom - provided medicine worth \$36,900, and shelter materials and seed valued at \$19,400.

Non-Governmental Organizations

Caritas/Australia - gave \$47,500.

Caritas/Germany - donated \$133,400.

PHILIPPINES - Volcanic Eruption



The Disaster

Mt. Pinatubo, a volcano located about 100 km. northwest of Manila, began erupting on June 8 after lying dormant for six centuries. Philippine and U.S. scientists had been monitoring the volcano for several weeks after it began to show signs of coming alive in April.

The evacuation of Aeta tribesmen living in villages on the volcano's slopes began on June 8 as steam clouds billowed over Pinatubo. Subsequent fiery explosions, and sustained, violent eruptions on June 14 and 15, sent mushroom clouds as high as 30 km. and unleashed avalanches of molten rock, ash, gas, and mudflows that cascaded down the volcano's flanks. Ashfall was deposited up to 40 km. from the volcano. Rain from Typhoon Yunya (Diding) combined with falling ash created mud deposits that caused roofs of buildings to collapse, accounting for many of the early deaths.

In Angeles City, some 20 km. east of Mt. Pinatubo, ashfalls 8-10 cm. thick caused the collapse of 5% to 10% of roofs. A hospital wing in Olongapo caved in, killing eight people. The international airport in Manila was closed to jet traffic until June 25 because of the danger posed by volcanic ash clogging aircraft engines. Thick ash deposits on roads in the affected area and flooding from the typhoon and seasonal rains hampered ground traffic as well.

The two largest U.S. military bases in the Philippines, Clark Air Force Base and Subic Naval Base, were seriously damaged by the volcanic eruptions, prompting the evacuation of 20,000 military dependents and over 4,500 non-essential personnel back to the United States. Because of the thick ashfall that covered runways and buildings, the U.S. military officially closed Clark AFB in November.

In the weeks following the cataclysmic eruption, heavy rains generated by typhoons and the southwest monsoon triggered lahars (mudflows carrying volcanic debris) and flooding, which caused further widespread damage in the most seriously affected provinces of Pampanga, Zambales, and Tarlac. Many of the major rivers in central Luzon, heavily silted by volcanic ash and debris, changed course and overflowed their banks, threatening densely populated areas. Several drownings and deaths in mudflows were reported.

Prior to the major eruptions, thousands of Filipinos were evacuated from cities and towns near the volcano. The migration to evacuation camps and large cities continued over several months as new areas were threatened by mudflows and flooding. Emergency shelters were located in schools, churches, local sport centers, and tent cities. The number of people sheltered at evacuation camps varied from day to day, as people returned to their homes only to be forced back to camps by new ashfalls or mudflows. The government's Department of Social Welfare and Development (DSWD) reported that 326,769 people were assisted at the camps. As of Oct. 25, about 100,000 people were still living in the camps. Hundreds of thousands of other evacuees found refuge with friends or relatives. For the Aetas and many of the displaced lowlanders, a return to their ancestral homes was impossible. Resettlement appeared to be the only option.

Poor sanitation, malnutrition, and epidemics of childhood diseases took a severe toll in the evacuation camps. Over half of all deaths were attributed, either directly or indirectly, to the volcanic eruption. As of Sept. 28, the GOP reported 426 deaths in the camps, the majority of whom were Aeta children under the age of four. The leading causes of death were measles, diarrhea, and pneumonia. Volcano-related deaths from all causes reached 932, according to DSWD estimates. At least 1.2 million people were directly affected by Mt. Pinatubo's eruption.

The volcanic eruptions, mudflows, and flooding caused extensive economic losses and heavy damage to crops, roads, bridges, buildings, and other infrastructure. Some 108,000 homes and numerous hospitals, health centers, and schools were destroyed or damaged, as were at least 28 bridges, 17 water systems, and five irrigation systems. The affected bridges included the Abacan and

Bamban bridges on the north Luzon tollway, north of Angeles City, and the Cabatican bridge, west of Angeles. Flooding and mudflows overran portions of the cities of Concepcion and Angeles and inundated the towns of Bacalor and Guagua in Pampanga. Many towns were inundated repeatedly and entire barangays (small communities) in some areas were washed out or isolated by mudflows. Agricultural losses included not only the immediate damage to crops, livestock, and fisheries, but also the potential losses due to the silting of irrigation canals and the loss of arable land to ashfall and lahars. The government estimated that eruptions and lahars caused more than \$260 million worth of damage to public and private property. Due to the ongoing nature of the Mt. Pinatubo disaster, estimates for reconstruction costs, future income, and infrastructure losses are likely to rise much higher.

Although scientists believed that the most violent eruptions ended after the June 14-15 paroxysms, the alert level for the volcano remained at five (the highest on a scale of one to five that designates the degree of danger) for several months due to continued seismic activity and intermittent eruptions. The major threat, however, was from massive mudflows expected to continue for several rainy seasons to come. Experts estimated that the amount of volcanic material spewed out by the volcano was five to eight cubic kilometers, roughly 20 times that emitted by Mt. St. Helens in 1980. As little as 5% of the pyroclastic material deposited on the mountainside by the June eruption had been eroded in the form of mudflows by the end of the 1991 rainy season. Another 25% of the debris will be washed away in the next three years, and 50% of the volcanic material will be eroded by the time lahars subside at the end of the century. The remaining 50% of the debris is expected to remain on the mountain.

Action Taken by the Government of the Philippines (GOP)

Scientists from the Philippine Institute of Volcanology and Seismology (PHIVOLCS) began monitoring the volcano in early April. They appealed to the USG to assist by sending U.S. volcanologists and equipment. The relatively low casualty figure directly attributable to the volcanic eruption was due to the early warnings made possible by the continuous monitoring. USGS expert, Dr. Christopher Newhall, helped lead the USGS/

PHIVOLCS preparedness efforts leading up to the eruption, including preliminary visits to villages near the volcano. Dr. Newhall also provided timely advice to disaster managers in the Philippines on decisions to evacuate populations at risk during the eruption.

The Philippine Civil Defense and local authorities organized massive evacuations when the volcano first threatened to erupt. Officials subsequently carried out search and rescue, and evacuation operations to save families whose homes had been submerged by mudflow or floods. Several teams of volcanologists surveyed the volcano's slopes to determine where the threat of mudflows was the greatest. Philippine Armed Forces troops were also deployed to stricken areas to assist with relief operations.

President Corazon Aquino declared a state of emergency in the affected municipalities and ordered government agencies to mobilize for a major relief and rehabilitation effort. The Philippine National Red Cross (PNRC) and the DSWD were the primary relief agencies working in the shelters and with the affected population. The GOP Department of Health (DOH) attempted to address the health care problems aggravated by the disaster, especially to ensure immunization coverage for the vulnerable population and improved sanitation in the semi-permanent evacuation sites. As of Sept. 4, 1991, GOP relief agencies, local NGOs, and private groups had provided assistance of about \$25.5 million. The National Food Authority had released about 3,000 MT of rice to the DSWD for emergency feeding as of the same date.

The Department of Public Works and Highways began clearing ash and volcanic debris, where possible, and repairing roads and electric and water systems. Protective barriers were built in some locations to protect bridges, roads, and settlements against damage from mudflows. In addition, warning systems were established, and evacuation plans drawn up. The GOP consulted with the USGS and a team from the U.S. Army Corps of Engineers to design engineering interventions to mitigate the effects of future lahars and flooding.

President Aquino created a task force consisting of four committees to identify and set priorities for rehabilitation activities. The task force published a

report focusing on infrastructure, resettlement, livelihood, and social services. The National Economic Development Authority (NEDA) further defined the proposed projects, to be carried out in three phases. Phase I covers continuing rescue and relief activities and has as a major component to improve the warning system and emergency preparedness measures. Phase II, which deals with rehabilitation and recovery, includes projects to repair infrastructure, and help disaster victims resettle and regain a means of livelihood. Phase III involves long-term reconstruction projects. President Aquino met with the diplomatic corps on Oct. 9 and provided a summary of the GOP's plans for an \$824 million long-term reconstruction program. The GOP also announced plans to build at least 16 new towns as permanent resettlement areas for displaced people.

Besides the major relief effort carried out by the PNRC, other Philippine NGOs also responded. The Philippine Business for Social Progress (PBSP) established a network to distribute relief goods in Zambales, Pampanga, and Tarlac. The assistance was channeled through an inter-agency network of voluntary agencies and a corporate network for business groups. As of Sept. 30, the Corporate Network for Disaster Response (CNDR) had dispatched 14 container vans, 12 trucks, and three busloads of relief goods to NGO partners in the affected provinces, benefiting some 37,562 families.

Assistance Provided by the U.S. Government

On April 22, USAID/Manila invited a team from the USGS to join Philippine scientists in studying the volcano and making recommendations to the Mission, the U.S. military, and the GOP. Equipment carried by the team performed seismic measurements and other analyses of the volcano. The equipment was part of a Volcano Crisis Assistance Team (VCAT) cache provided by the USGS and OFDA and kept at the Cascades Volcano Observatory for deployment around the world in volcano emergencies. Dr. Christopher Newhall of the USGS initiated the response, well before most others in the scientific community outside the Philippines were aware the risks.

The USG replaced equipment lost during the major eruptions and donated that and the remaining equipment to the Philippines for the probable long-term need at Pinatubo. The donated equipment was valued at

\$316,680 which included mudflow sensors. OFDA purchased monitoring equipment for the VCAT cache to replace the equipment donated to the Philippines. The replacement equipment, valued at \$281,280, will be used to monitor Mt. Pinatubo until the crisis ends. Because of the long-term and largely mitigative nature of the monitoring activities, OFDA funding for the VCAT equipment came from the PMP account.

The expenses of the USGS scientists and the cost of field operations for the period April 22 to June 9, 1991, were \$193,850 and paid for by USGS, USAID, and the U.S. Air Force (for aircraft). The costs through July 31, borne by OFDA, were \$291,829 (PMP account). Expenses of the USGS teams through Sept. 30 amounted to approximately \$392,500, paid partly by DOD (\$211,000) and the remainder (\$181,500) by USGS. NOAA's provision of satellite imagery of the volcano was valued at \$100,000, and the support of four National Science Foundation (NSF) personnel working with PHIVOLCS cost about \$25,000. USGS volcanologists, including mudflow experts, remained at the volcano site in 1992 to monitor events.

On June 10, U.S. Ambassador Nicholas Platt determined that the volcanic eruptions constituted a disaster. He released \$25,000 under his Ambassador's Authority to donate to the PNRC for the relief effort. At the request of USAID/Manila, OFDA provided a \$500,000 grant to PBSP to purchase water containers, food, shelter materials, and medical supplies for displaced persons in Zambales, Pampanga, and Tarlac provinces. PBSP managed the grant, which was implemented by four NGO partners.

OFDA sent an expert on the health effects of breathing volcanic ash to Manila on June 21. Dr. Peter Baxter of the University of Cambridge, United Kingdom, worked with the DOH to set up a volcanic ash monitoring and analysis system. The cost of Dr. Baxter's travel, funded by OFDA, was \$14,810. In addition, OFDA located a soils expert to assess the mid- and long-term effects of ashfall on soils, and the fertility of the soil for future crop production. Dr. Steve Holzhey, a senior scientist with the Soils Conservation Service of USDA, spent two weeks in the Philippines. His expenses were estimated at \$8,000.

OFDA approved a grant for \$445,000 to CARE for tools, shelter materials, tents, and cash wages paid to evacuees who assisted the GOP in the clean-up of ash deposits. The beneficiaries were mainly the Aetas. OFDA also provided \$125,000 to assist the DOH in its effort to maintain an acceptable level of health in the evacuation camps. USAID used the funds to purchase 16 generator units, 10 water trailer tanks, two units of portable declogging equipment, portable latrines, and emergency lights.

USAID authorized the release of P.L. 480 Title II food commodities from regular program stocks to be distributed by CRS and CARE to the evacuees. The food was valued at \$324,866. Additionally, USAID provided \$100,000 to the Philippine Department of Agriculture for agricultural rehabilitation.

USAID/Manila hired three experienced Filipino disaster managers and sent them on continuous reconnaissance travel around the volcano to collect the most current information on volcanic hazards, mudflows, and the conditions at displaced persons camps. They reported periodically to USAID/Manila. There were also numerous field visits by American disaster managers from USAID/Manila and A.I.D./Washington. In July, USAID contracted with Louis Berger International, at a cost of \$102,000, to send a four-person team to conduct an in-depth infrastructure damage assessment in Region III.

DOD provided an estimated \$3.5 million worth of MREs (meals ready to eat) to the DSWD for distribution to victims of the disaster, as well as blankets, water containers, and other relief supplies. U.S. Naval forces worked with some 30 relief organizations to distribute over 100 truckloads of relief supplies and construction material. Navy personnel helped to repair schools, hospitals, and other structures and provided medical and dental services. The value of the civic action assistance was estimated at \$7.8 million.

On July 27, OFDA authorized the payment of \$160,000 to DOD to airlift a shipment of relief supplies from the A.I.D. stockpile in Guam to Manila. The shipment of 493 rolls of plastic sheeting (1,281,800 sq. ft.), 5,916 cotton blankets, and 8,420 wool blankets arrived in Manila on July 30. Two OFDA-funded housing experts traveled to the Philippines in mid-August to advise on

the correct use of plastic sheeting for temporary shelter. Demonstrations were held in Botolan (Zambales) and Concepcion (Tarlac) on Aug. 13 and were attended by representatives from the PNRC, DSWD, and various NGOs and government offices. A second shipment of 500 rolls of plastic sheeting and 6,000 cotton blankets was transported from the Singapore stockpile by DOD in September at a cost to OFDA of \$118,000. To meet continuing emergency needs, OFDA dispatched a third shipment of plastic sheeting (350 rolls) via DOD aircraft, to the Philippines on Nov. 7 at a cost of \$84,245 for transport. Some of the plastic went to provide shelter for victims of flooding in Leyte caused by Tropical Storm-Thelma (Uring).

OFDA arranged to send a four-man team from the U.S. Army Corps of Engineers (USACE) to work with the GOP Department of Public Works in studying ways to ameliorate the continuing impact of mudflows and flooding. The team, which arrived in the Philippines on Sept 6., surveyed the damage to irrigation systems, transportation facilities, villages, and other infrastructure. Their report was used by the Philippine government and the USAID/Manila to aid in setting priorities for future mitigation and rehabilitation activities. The Army paid team salaries, amounting to \$25,000, and OFDA obligated \$15,000 for travel and per diem.

A team of consultants from INTERTECT visited the Philippines from Nov. 21 to Dec. 4 to review the emergency response, identify gaps in the rehabilitation effort, and recommend priorities. USAID/Manila used the findings and recommendations of the team as a focus for its program to lead a coordinated response by donors to the future needs of Mt. Pinatubo's victims. OFDA funded the team's expenses of \$17,518.

As of March 1992, USAID/Manila had reprogrammed \$24 million from prior year development assistance funds for the Mt. Pinatubo Disaster Relief and Rehabilitation program. This included \$2 million in Project Design funds for the engineering design of schools; \$10 million from the Regional Development Fund for the construction or rehabilitation of schools and for the design of the Olongapo City General Hospital; and \$12 million from Rural Infrastructure Projects funds for USACE, the construction of schools, and the Olongapo City Hospital. Major activities to be undertaken under a long-term USAID contract with

USACE included the evaluation and assessment of existing pyroclastic and sediment deposits, and the identification of possible alternatives for controlling sediment run-off and flood waters. USACE activities also included the aerial mapping of the Mt. Pinatubo area. USAID/Manila planned to reprogram an additional \$8 million from FY 1992 Economic Support Funds for the reconstruction of schools and hospitals, bringing the total in reprogrammed funds to \$32 million.

Also, from FY 1992 funds, USAID/Manila provided a grant for \$740,740 to the J.V. Ongpin Foundation, Inc., for Aeta health care, as well as a \$250,000 grant to PHIVOLCS to support volcano and hydrological monitoring.

Summary of USG Assistance

FY 1991

OFDA Assistance

| | |
|--|-----------|
| Ambassador's Authority | \$25,000 |
| Grant to PBSP | \$500,000 |
| Expenses of medical expert | \$14,810 |
| Expenses of soils expert (USDA/RSSA) | \$8,000 |
| Grant to CARE | \$445,000 |
| Grant to GOP Dept. of Health | \$125,000 |
| First DOD airlift of stockpile items | \$160,000 |
| Second DOD airlift of stockpile items | \$118,000 |
| Replacement cost of 8,420 wool blankets | \$34,101 |
| Replacement cost of 993 rolls of plastic sheeting and grippers | \$293,320 |
| Expenses of housing experts (\$6,115 from travel funds) | \$11,530 |
| Travel of USACE team | \$15,000 |

Expenses of USGS team (6/10-7/31)
(PMP funds) \$291,829

Donated volcano monitoring equipment
(PMP funds) \$316,680

Replacement cost of VCAT equipment
(PMP funds) \$281,280

FFP Assistance

Value of P.L. 480 food \$324,866

DOD Assistance

Value of MREs \$3,500,000

Civic action assistance \$7,800,000

Partial expenses of USGS team (7/31-9/30) \$211,000

Salaries of USACE team \$25,000

Other USG Assistance

Initial expenses of USGS team (4/22-6/9)
(USAID, USGS) \$193,850

Partial expenses of USGS team (7/31-9/30)
(USGS) \$181,500

Cost of satellite imagery (NOAA) \$100,000

Expenses of NSF personnel (NSF) \$25,000

Assistance to GOP Dept. of Agriculture
(USAID) \$100,000

Louis Berger assessment (USAID) \$102,000

Reprogrammed funds for rehabilitation
(USAID) \$24,000,000

Total OFDA **\$2,639,550**

Total FFP **\$324,866**

Total DOD **\$11,536,000**

Total Other USG **\$24,702,350**

Total FY 1991 **\$39,202,766**

FY 1992

OFDA Assistance

Third DOD airlift of stockpile items..... \$84,245

Expenses of INTERTECT team \$17,518

Transport to replace blankets and plastic
to stockpile \$36,381

Other USG Assistance

Grant to Ongpin Foundation (USAID) \$740,740

Grant to PHIVOLCS (USAID) \$250,000

Reconstruction activities (USAID)..... \$8,000,000

Total OFDA *\$138,144*

Total Other USG *\$8,990,740*

Total FY 1992..... *\$9,128,884*

TOTAL **\$48,331,650**

Assistance Provided by U.S. Voluntary Agencies

ARC - donated \$40,000 and provided 440 tents, 96 rolls of plastic sheeting, 1,000 water containers, and eight pallets of medical supplies, valued at \$125,000.

Baptist World Alliance - provided medical assistance through its Philippines affiliate.

CARE - drilled wells at evacuation camps and provided water containers, tents, and tarps for more than 7,000 families. CARE also donated 175 rolls of plastic sheeting and distributed 200 MT of food.

CRS - donated \$22,900.

LWR - gave \$15,000 through the Lutheran World Federation.

Pearl S. Buck Foundation - provided \$27,000 for food relief.

St. Vincent de Paul (New York) - donated 1,800 blankets.

WVRD - gave \$380,000 to the relief effort, providing rations for three months for 1,000 families in evacuation centers, powdered milk for 500 children, and shelter material for 500 families.

Assistance Provided by the International Community

International Organizations

Asian Development Bank - announced the availability of funds for immediate needs within the Angeles-San Fernando corridor. In this zone, ADB would meet infrastructure needs of three resettlement sites and finance income generation projects for the resettled.

EC - contributed \$361,446.

FAO - gave \$50,000.

International Labor Organization - gave \$30,000 for technical assistance.

LRCS - issued an appeal on June 21 on behalf of the PNRC and sent a delegate to the Philippines.

UNDP - donated \$500,000 for rehabilitation and \$50,000 for tents and blankets.

UNDRO - made an emergency grant of \$25,000, sent a volcanologist to assist local authorities, and launched an international appeal. An UNDRO team conducted an 11-day mission to help assess damage and coordinate the international response.

UNICEF - authorized the release of \$250,000 for the purchase of relief supplies.

World Bank - planned a 10-year infrastructure rehabilitation project.

WFP - sent assessment teams and donated \$50,000. WFP also provided rice, dried fish, cooking oil, and food packs, as well as transportation, at a total cost of \$867,752.

WHO - donated \$15,000 for drugs and medical supplies.

Governments

Australia - gave \$311,500 for relief and rehabilitation, and \$64,000 for medical supplies and equipment for the Olangapo hospital.

Belgium - contributed \$13,514.

Canada - channeled \$184,794 through the PNRC and other NGOs.

China, People's Rep. - gave \$20,000.

China, Rep. - provided \$215,385 and 200 large tents.

Denmark - contributed \$30,534 to the PNRC.

Finland - gave \$100,000.

France - donated \$17,331 to the PNRC.

Germany - donated relief supplies worth \$57,692, along with \$150,427 to the PNRC.

Japan - donated cash and relief items and provided technical assistance, including mudflow early warning systems and expert survey teams for mudflows, flood control, volcanic monitoring, and communications. Total assistance was valued at \$1,500,000. Japan also planned to send experts to help the GOP develop resettlement plans and to assist with infrastructure rehabilitation.

Korea, Rep. - provided \$100,000.

Netherlands - donated \$76,923.

New Zealand - gave \$30,769.

Norway - provided \$227,906 to various relief organizations.

Saudi Arabia - contributed 140 tons of food and three mobile clinics.

Singapore - donated 250 large tents and 100 small tents.

Spain - gave 20 tons of canned food and other relief items, all valued at \$309,735.

Sweden - gave \$307,692 to the PNRC and \$30,769 to Scandinavian Children Mission.

Thailand - contributed \$77,973, as well as medicine worth \$116,959 and rice valued at \$148,148.

United Kingdom - channeled \$271,902 through various NGOs.

Non-Governmental Organizations

Caritas/Germany - donated \$55,556.

Caritas/Norway - gave \$78,459

Danchurchaid - contributed \$15,267.

Diakonisches Werk - provided donations totaling \$289,619 through several other NGOs.

Enfant et Developpement (EED) (France) - working under the EC, carried out a food-for-work program in Angeles City. A total of \$64,248 had been appropriated by EED as of Aug. 30 for clearing, rehabilitation, and health services.

Japanese club in Manila - gave \$38,462.

Red Cross Societies from Australia, Brazil, Canada, Finland, the United Kingdom, Iceland, Japan, Korea, Rep., Norway, and Sweden donated a total of \$694,782.

THAILAND - Accident

Date: March 2, 1991

Location: Bangkok; Klong Toey port area

No. Dead: At least 9

No. Affected: More than 15,000 residents of Klong Toey suffered some ill-effects; some 5,000 were left homeless

Total USG Assistance: \$62,985

The Disaster

A series of explosions ripped through warehouses at Bangkok's main port on the morning of March 2, leaving at least five people dead and many more injured. Highly volatile chemicals stored in a warehouse at the Klong Toey port apparently ignited spontaneously when exposed to heat on a particularly warm day. The initial explosion set off a chain reaction in the warehouse and in two adjacent buildings. A slum neighborhood (Koh Lao) near the port was completely destroyed by the ensuing fire which smoldered for hours. The local fire department was unable to control the blaze because of a lack of appropriate material to extinguish a chemical fire. Also, the nature of the chemicals was not known. The use of water to attempt to put out the fire only exacerbated the situation, creating more explosions and fire. At least three chemical fires had occurred in the same area during the preceding 20 months. Since many of the commercial chemicals unloaded at the port and stored in warehouses are never claimed by local consignees, and some are apparently waste chemicals, port authorities find it difficult to identify the chemicals.

More than 5,000 residents of the Koh Lao community lost their homes and all their belongings in the fire. A potentially more serious consequence of the disaster, however, was the threat to public health posed by the release of unknown chemicals. All of the deaths and most of the serious injuries following the explosion occurred in the residential area close to the chemical storage areas; however, residents further away in the Klong Toey community also became ill. According to initial estimates, more than 50% of the 30,000 residents of Klong Toey suffered some ill-effects, many of them requiring medical attention at nearby hospitals. Symptoms included red, watery eyes, skin rashes, chest

pain, dizziness, and respiratory difficulties. At least four more deaths were attributed to the disaster, when an infant and three adults who had been exposed to large amounts of burning or spilled chemicals died on March 21.

Action Taken by the Royal Thai Government (RTG)

Government agencies responded promptly to the victims' needs, providing medical attention, food, and clothing at the scene. The RTG Ministry of Public Health (MOPH) established clinics in Klong Toey and conducted door-to-door surveys to identify survivors in need of medical treatment or evaluation. Realizing deficiencies in the MOPH to assess health effects of the chemical release, officials requested USG technical assistance in identifying the agents involved and in monitoring the effects on people exposed to chemicals by inhalation of smoke, including the potential damage to unborn infants.

Over 650 families were evacuated from the contaminated area and removed to a tent camp about one kilometer away. Materials to construct new dwellings for the homeless were to be provided by the Bangkok Metropolitan Authority, the port authority, and the Thai military. Publicity surrounding the explosion and fire prompted a generous outpouring from private citizens and public institutions to meet emergency needs of the victims.

Assistance Provided by the U.S. Government

U.S. Ambassador Daniel A. O'Donahue made a disaster determination on March 4 and released \$25,000 under his Disaster Assistance Authority to respond to the immediate needs of victims of the explosion and fire. The Mission Disaster Relief Officer (MDRO) made multiple visits to the disaster site, meeting with senior staff of the Director General of the Department of Social Welfare to discuss emergency needs of the victims. On March 25, the MDRO and a USAID public health officer met with physicians from the Thai Ministry of Public Health, who issued an official request for USG technical assistance in identifying the chemicals and evaluating the medical needs arising from the disaster.

The request was relayed to OFDA, which arranged to send a health/environmental team to Thailand from the United States. The team, comprising four officers from CDC with experience in environmental health and toxicological testing and two scientists from the Environmental Protection Agency (EPA) with expertise in environmental sampling methods, began its investigation on April 8. OFDA funded the travel expenses of four team members (\$29,440), and CDC paid travel costs of the other two technical experts (\$8,545).

The CDC/EPA team worked closely with the MOPH to collect information and specimens and develop a surveillance system for disaster-related deaths and injuries. The team also set up studies to evaluate chemical risks in Thailand, in order to help prevent future disasters. While air, soil, and water samples were collected for laboratory analysis, the team found that characterizing air quality at the time of the explosion was nearly impossible because of the amount of time that had elapsed since the incident. Moreover, data generated by the sampling did not support earlier theories regarding the respiratory and dermal symptoms exhibited by the affected population.

The team's recommendations are briefly summarized below. The reader is referred to the CDC and EPA reports on file at OFDA for more detailed information.

—Since first responders play a crucial role in controlling chemical disasters, firefighters should be trained in hazard recognition, protective measures, decontamination procedures, and innovative firefighting techniques for chemical incidents. Ideally, a Hazards Material Response Team for the port storage area should be trained.

—Because collecting environmental samples, particularly air samples, is time critical after a chemical incident, the training of personnel for this aspect of response is vital.

—Plants that store or use large quantities of hazardous or flammable chemicals should be sited at a safe distance from populated areas. Communities should be informed of the nature of chemicals in storage areas nearby and able to participate in decision-making

regarding zoning regulations. Communities should also be made aware of available emergency plans.

—The responsibility for overall control of accidents resulting from hazardous chemicals should be better coordinated in Thailand. (It is now distributed across several agencies.) The RTG should establish fundamental administrative and legislative guidelines for chemical accident preparedness and response. A planning committee should also be established to develop emergency response procedures.

—A database should be developed from an accident reporting system to help identify situations prone to accidents. A national map showing the distribution of potential accident sites could facilitate the identification of areas deserving priority for inspection and control activities.

—There is need for enhanced laboratory capabilities and better analytical methodologies in the Thai Division of Environmental Health and the Division of Toxicology. An epidemiologist from the Division of Epidemiology should be trained in environmental epidemiology. A scientific advisory body should also be established to promote research in epidemiology and toxicology, and to serve in an advisory capacity to decision-makers in environmental health.

| | |
|---|-----------------|
| <i>Total OFDA Assistance</i> | <i>\$54,440</i> |
| <i>Total Other USG Assistance</i> | <i>\$8,545</i> |

| | |
|--------------|-----------------|
| TOTAL | \$62,985 |
|--------------|-----------------|

OTHER ASIA DECLARED DISASTERS

AFGHANISTAN - Earthquake/Floods

On Feb. 1, 1991, an earthquake measuring 6.8 on the Richter scale shook northeastern Afghanistan and Pakistan causing extensive damage. Subsequently, heavy rain and an early melt of the winter snowpack released disastrous floods on the southern and western provinces of Afghanistan (see "Pakistan Earthquake").

The quake rocked the north and south sides of the Hindu Kush, reportedly killing 130 persons and displacing 1,440 families. The devastating floods, described by some Afghans as the worst in living memory, killed an estimated 415 people and destroyed homes and public buildings, displacing thousands of families. An estimated 90,000 people were affected by the two disasters.

The deluge submerged roads and demolished bridges, further complicating relief efforts by rendering villages and victims inaccessible. According to UNDRO reports, the floods destroyed dams and irrigation systems, and damaged water sanitation systems, leaving potable water in short supply in certain areas. Cascades of water also drowned livestock, and destroyed crops, and topsoil.

U.N. organizations, including UNOCA, UNDP, UNICEF, and WFP, led the relief effort, sending assessment teams into the southern provinces of Helmand, Nimroz, Kandahar, and Farah to determine the extent of flood damage, and to identify relief supply routes. They distributed quilts, blankets, tents, tarpaulins, plastic sheeting, and food to earthquake victims in the northern provinces and delivered emergency food, shelter, medical supplies, and other relief supplies to flood victims in the southern and western provinces.

Normally, it is the responsibility of the U.S. diplomatic mission in country to determine whether a disaster warrants U.S. assistance. As there was no diplomatic representation in Afghanistan during the time of the disasters, Deputy Assistant Secretary of State Teresita Schaffer, responsible for Near Eastern and South Asian Affairs, declared on Feb. 21 that the damage caused by the earthquake and floods constituted a disaster, and released \$25,000 to the Office of the Aid Representative for Afghanistan. The money was used to purchase blankets, food, shoes, clothing, and other relief items for distribution through U.N. organizations.

Various international governments also contributed to the relief effort, including France, which donated medicine valued at \$201,941 and \$49,603 in cash; the former USSR which donated 8,000 MT of wheat and 500 MT of sugar; Japan, which donated blankets, tents, ground-sheets, and an emergency kit valued at \$113,636, and channeled \$113,636 through LRCS for victims in Afghanistan and Pakistan; and the United Kingdom which provided tents, blankets and other relief supplies valued at \$195,312, and provided \$12,367 to fund UNDRO experts. Non-governmental organizations including Caritas/Germany, Edhi Trust, Oxfam/UK and the Kuwait Red Crescent, contributed tents, blankets, and other relief items. The total value of international contributions, governmental and non-governmental, as reported by UNDRO was \$7,052,348.

TOTAL USG

\$25,000

BURMA - Fire

Fires ravaged the low income residential area in the central Burmese city of Meiktila from April 7 through April 8, 1991. The flames gutted about 5,125 houses, made approximately 25,275 people homeless, took 21 lives, and left 120 people with third degree burns. The fire also destroyed the city's infrastructure, disrupted electricity and water supplies, wrecked a railway station, and razed part of a market building and 11 schools. Total damage was estimated at \$80,256,826.

The Government of Burma (GOB) organized military and civilian authorities into a local relief team. The team's Central Relief Committee and Rehabilitation Supervisory Committee, together with the Ministry of Social Welfare's Relief and Settlement Department, provided fire victims with food, medicine, and cooking utensils, as well as cement, corrugated iron sheets, and nails to construct temporary housing.

U.S. Charge d'Affaires Franklin Huddle declared a disaster on April 9 and called for the release of \$10,000 under the U.S. Ambassador's Disaster Assistance Authority to support the relief effort. The contribution was channeled through the Myanmar (Burma) Red Cross, and UNDRO/UNDP to purchase food, and to fund other necessary relief assistance.

International organizations provided the following assistance: The EC donated \$85,365; UNDP contributed \$50,000; and UNDRO provided a grant of \$20,000.

The following governments also reported contributions: Australia donated \$7,750; Germany gave \$4,513; and Japan provided \$174,000 worth of goods, including two medicine kits, 2,500 blankets, 1,000 mattresses, 796 electric torches, 3,500 batteries for torches, 1,000 sets of kitchen utensils, 560 tanks, 3,000 bars of soap, 280 kg. of detergent, and 3,000 towels.

TOTAL USG \$10,000

BURMA - Floods

Torrential rains lasting from mid-July through mid-September, 1991, descended from Burma's Western Yoma Mountains and pounded the northern region of the country. As a result, the Ayerwaddy and Ngawun rivers swelled to dangerous proportions, leading to severe flooding that caused the collapse of the Hteingu Embankment in Laymyetnar Township, further exacerbating the deluge. In addition to Laymyetnar, other townships affected were Hinthada, Ingabu, Yekyi, Kyonpyaw, Kyaunggone, East Pathein, Einme, and Thabaung.

According to the Government of Burma (GOB), the Hteingu floods immersed nine townships comprising 1,481 villages, 83,753 households, and 359,976 inhabitants, of whom 350,000 were left homeless and 23 were killed. In addition, four hospitals, 37 rural health facilities, 586 schools, and 74,740 other buildings were destroyed. Serious losses were felt in the agricultural sector, where 18,976 draft animals were drowned, and 958,735 ha. of cultivated land were submerged, completely wiping out 914,257 ha. of rice paddy, and 44,477 ha. of jute, fruit, and other vegetable crops. Total damage was estimated at approximately \$80 million.

The long duration of the inundation also caused great health risks and problems for the already suffering villagers. At least 4,573 people reportedly suffered from chronic diarrhea, 13,120 had both respiratory difficulties and malaria, and four people were bitten by snakes. Local health officials feared the increasing spread of malaria, since the Ayerwaddy portion of the disaster-affected area is particularly mosquito infested. They

were also concerned that flood victims might contract cholera or hepatitis. Survivors also ran the risk of being bitten by snakes competing with them for dry land. An impending food shortage further compounded the already dismal situation.

In response, the GOB promptly united with its citizens to organize and implement local relief efforts from a national level to divisional township and village levels. The divisional Law and Order Restoration Council (LORC) and the Relief Settlement Department established 170 relief camps located on higher ground, registered 78,000 victims, and provided each household with \$31.75 to pay for a one-week supply of rice, one blanket, and two aluminum pots. Also, donation centers were opened throughout Burma. Local private cash and in-kind donations totaled \$160,000. In addition, the Relief and Settlement Department and the local LORC supplied the camp population with a two-week supply of rice, cooking oil, and kerosene. Despite the very admirable efforts of the local population, however, according to the two U.N. assessment teams that visited the affected areas, the magnitude of the disaster exceeded their capacity to respond to the crisis. Thus, in early August, the GOB appealed for international emergency assistance through UNDRO. Urgent needs included food items, clothing, blankets, kitchen utensils, mosquito nets, anti-snake venom serum, vitamins, medicine for the treatment of malaria and diarrhea, water purification tablets, water tanks, plastic sheeting, flat-bottomed boats, and bleaching powder.

On Sept. 8, U.S. Charge D'Affaires Franklin Huddle declared that the situation was a calamity and donated \$6,000 under his Disaster Assistance Authority through UNDRO to the Burmese Foreign Minister. Funds were used to locally purchase food for the flood victims.

Other international donors also contributed emergency assistance. The EC issued a \$360,000 grant though LRCS to procure basic supplies for the affected population; FAO sent \$315,000; UNDP donated \$50,000; UNDRO made a gift of \$15,000; UNICEF gave \$125,000; and WHO donated \$48,559. Other cash contributions were made by the following governments: Australia (\$15,910), Austria (\$28,435), Canada (\$66,372), China (\$100,000), Germany (\$34,155), Italy (\$160,000), Korea (\$30,000), the Netherlands (\$52,600), the United Kingdom (\$16,863), and the Vatican

(\$31,746). Japan donated 1,000 blankets, 3,000 bars of soap, 3,000 towels, two medical kits, and 240,000 water purifying tablets, equivalent in value to \$120,000. Lastly, WVRD allotted \$42,000 for the provision of relief supplies and services.

TOTAL USG \$6,000

INDONESIA - Earthquake

According to UNDRO, on July 4, 1991, at 8:00 p.m., a 6.7 magnitude earthquake shook Kalabahi, the capital of the Indonesian island of Alor, located in east Nusa Tenggara Timor (NTT) Province. The same area was jolted five hours later by a powerful aftershock. The *Jakarta Post*, regency officials, and the Indonesian Disaster Management Center (IDMC) reported 28 deaths, 199 injuries, 1,000 homeless, and 15,000 affected persons out of Alor's population of 150,000. In addition, the temblor damaged 1,985 houses, 178 public buildings, and 79 churches and mosques. Total damage caused by the quake was estimated by the IDMC at \$5,128,200.

The Government of Indonesia (GOI) coordinated local humanitarian organizations, the private sector, and individual citizens to respond to the needs of the affected population in Alor. The GOI evacuated homeless victims to temporary shelters established in schoolyards. It also transported two doctors and several medical workers from Kupang, the capital of NTT Province, to provide badly needed medical services to the injured. A search and rescue team and 126 military officers were dispatched from Kupang and Dili, the capital of East Timor Province, bearing medicines and other emergency supplies to Alor.

According to the IDMC, the NTT local government's Department of Social Affairs donated 60 blankets, one ton of rice, and \$128 for the purchase of emergency food. In addition, NTT's Red Cross Office and other local public and private sources together provided \$89,460, 112 cartons of instant noodles, 32 tons of rice, 400 items of clothing, 160 blankets, as well as medicine, lanterns, and soap to the quake victims.

On July 9, 1991, U.S. Charge d'Affaires Richard L. Wilson declared that the damage caused by the earthquake constituted a disaster. On July 24, under the

U.S. Ambassador's Disaster Assistance Authority, the Charge released \$25,000 to the Indonesian Minister of Social Affairs for relief efforts.

CRS provided the GOI with 100 tons of USG-donated P.L. 480 Title II rice from CRS' pre-existing stocks in Kupang for emergency feeding programs. CRS was also involved in conducting needs assessments of the quake victims.

New Zealand contributed \$14,082 in disaster assistance to Kalabahi.

TOTAL USG \$25,000

MALAYSIA - Accident

On May 7, 1991, in Sungei Boloh, a chemical spill in an illegal fireworks factory set off a chain reaction throughout the factory. The spill occurred during an experiment conducted to create larger and more powerful fireworks. The subsequent industrial explosions and fires ripped apart the factory, flattened three city blocks, razed over 45 homes, and severely damaged another 150 dwellings. In the affected area, some 22 people were killed, 125 were injured, at least 15 were missing, and approximately 260 were left homeless.

The Malaysian Red Crescent Society (MRCS) coordinated the Government of Malaysia (GOM)'s relief effort. Immediately after the explosion, the MRCS responded by dispatching four ambulances, two land cruisers, one flatbed truck, and 40 MRCS medical workers to transport the dead and injured to the General Hospital at Kuala Lumpur. A nine-person MRCS team set up an emergency center to provide on-site first aid services. The MRCS's mobile information and mobile canteen units supplied the disaster victims with food, clothing, blankets, and other items. The Sungei Buloh School System and the Selangor Information and Welfare Departments also participated in the relief effort.

Determining that the calamity warranted USG assistance, on May 9, 1991, U.S. Ambassador Paul M. Cleveland contributed \$9,088 under his Disaster Assistance Authority, through the MRCS, to the fire victims.

Other emergency contributions from clubs, organizations, firms, foreign governments (approximately \$48,793), and from public collection boxes at the disaster site and at nearby shopping centers (about \$9,418), totaled \$58,211.

TOTAL USG \$9,088

PAKISTAN - Earthquake

On Feb. 1, 1991, an earthquake measuring 6.8 on the Richter scale shook northwestern Pakistan, primarily affecting Malakand, the upper and lower Chitral valley, and the districts of Bajaur, Dir, and Swat. The earthquake, whose epicenter was in the Hindu Kush mountain range in northeast Afghanistan, struck at 4:04 a.m. local time, and lasted for almost one minute (see "Afghanistan - Earthquake"). According to Government of Pakistan (GOP) estimates, 204 died and 638 were injured as a result of the earthquake (UNDRO estimated the death toll at 300). Approximately 3,800 livestock also perished.

A week of heavy snow and rain following the quake complicated immediate damage assessment and relief efforts. Final assessments revealed little reported damage to government buildings, including schools, hospitals, and public buildings, which were constructed to withstand earthquake damage. Private homes did not fare as well. Traditional village houses in Pakistan, built from uncut stone and mud, and highly susceptible to earthquake damage, could not withstand the tremors, and 7,000 houses were destroyed, and over 42,000 damaged. Area power supplies were cut, and communication lines were damaged by the earthquake and the heavy snowfall. No severe damage was reported in the capital city, Islamabad.

On Feb. 2, the GOP called for donations to the prime minister's disaster relief fund, established to help earthquake victims. The GOP distributed blankets, tents, and medicine from federal reserves to the affected provinces. The day after the quake, the prime minister visited Chitral and Bajaur, and announced that the GOP would provide funds for family members and property lost in the quake. The GOP distribution included \$904 per family that suffered a death of one of its members, \$1,130 per family to rebuild destroyed homes, and \$23 for each head of cattle lost. The GOP believed that

grants to rebuild homes and the provision of cement, sand, bricks, and other material would result in the construction of earthquake-resistant houses. The total rehabilitation bill was estimated at \$32 million.

As a result of the earthquake, U.S. Ambassador Robert Oakley declared a disaster in Pakistan on Feb. 4, 1991, and allocated \$25,000 to the prime minister's emergency relief fund. Major international players in the relief effort were the EC, Japan, UNDP, UNDRO, and WFP, which participated in a joint assessment of the affected areas. These aforementioned groups contributed the following: UNDP donated \$50,000; UNDRO gave \$30,000; WFP gave 600 MT of wheat, valued at \$120,000; the EC contributed \$700,000 in emergency aid for Pakistan and Afghanistan, of which about \$140,000 was used to purchase and distribute tents, blankets, and other equipment to homeless people in Pakistan; and Japan gave relief supplies and cash through LRCS for earthquake victims in Pakistan and Afghanistan (see "Afghanistan - Earthquake"). The total value of international contributions, governmental and non-governmental, as reported by UNDRO was \$1,377,910.

TOTAL USG \$25,000

PEOPLE'S REPUBLIC OF CHINA- Typhoons

A series of eight typhoons caused widespread damage in six of China's east and southeast provinces during July and August 1990. Fujian and Zhejiang provinces were hit with particular severity. However, damage was also extensive in the provinces of Anhui, Guangdong, Hainan, and Jiangsu, and in Shanghai City. According to the government's Ministry of Civil Affairs, the storms killed 559 people and injured another 2,983. Some 340,000 homes were destroyed and 1,164,000 dwellings were damaged, affecting an estimated 7.5 million people. The economic losses caused by the typhoons were estimated at over \$1.2 billion.

The Government of the People's Republic of China (GPRC) indicated that it would welcome international assistance to alleviate the suffering of the storm's victims. The GPRC cited the need for grain, tents, blankets, and bleaching powder for emergency relief, and building materials for rehabilitation and reconstruction.

On Sept. 19, U.S. Ambassador James R. Lilley responded with a disaster declaration and, under his Disaster Assistance Authority, donated \$25,000 to the relief effort. A check for that amount was presented to the GPRC Deputy Director of the Department of International Relations for the Ministry of Foreign Economic Relations and Trade, who stated that the funds would be used for the purchase of food and clothing. *(Note: Because of transmission problems, the declaration cable for this disaster was not received by OFDA until Nov. 7, 1990; hence, funding was from FY 1991 accounts.)*

TOTAL USG \$25,000

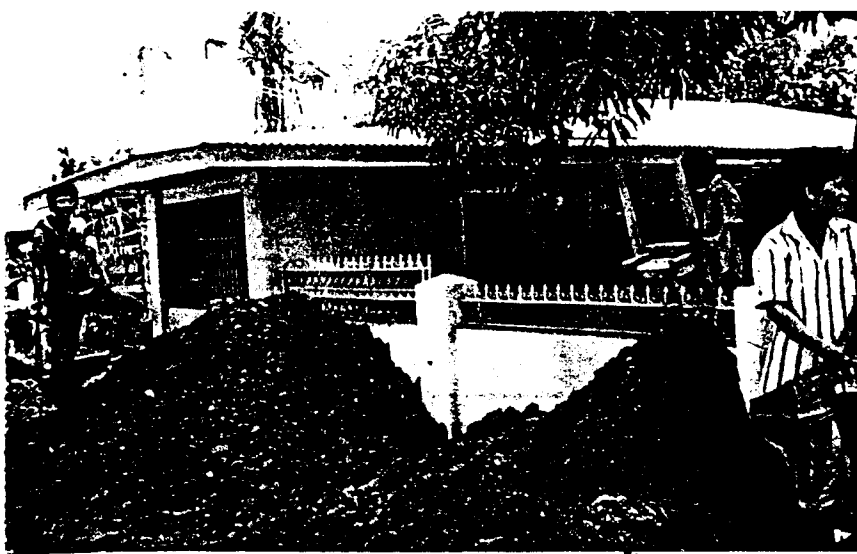
SRI LANKA - Floods

A series of violent and prolonged rainstorms from May 31 through June 5, 1991, resulted in widespread flooding, especially in the Galle, Kalutara, Colombo, and Gampaha districts in the southern part of Sri Lanka. Inundations caused by this southwest monsoonal rain adversely affected over 20,000 families, and killed 12 people. Most deaths were caused by drowning or by houses caving in and burying their inhabitants alive. Hundreds of buildings collapsed, and several roads were badly damaged from being under 1.2 meters of water. Due to the dangerously high water level, fishermen of the western and coastal areas were warned to stay away from the sea for several days.

The Government of Sri Lanka's Department of Social Services supplied all flood survivors with dry rations, and Sri Lankan Red Cross volunteers gave relief aid to victims in the Galle and Kalutara districts.

U.S. Charge D' Affaires Donald B. Westmore issued a disaster declaration on June 6, 1991 and donated \$25,000 to provide medical supplies, food, clothing, and transportation to those affected by the floods.

TOTAL USG \$25,000

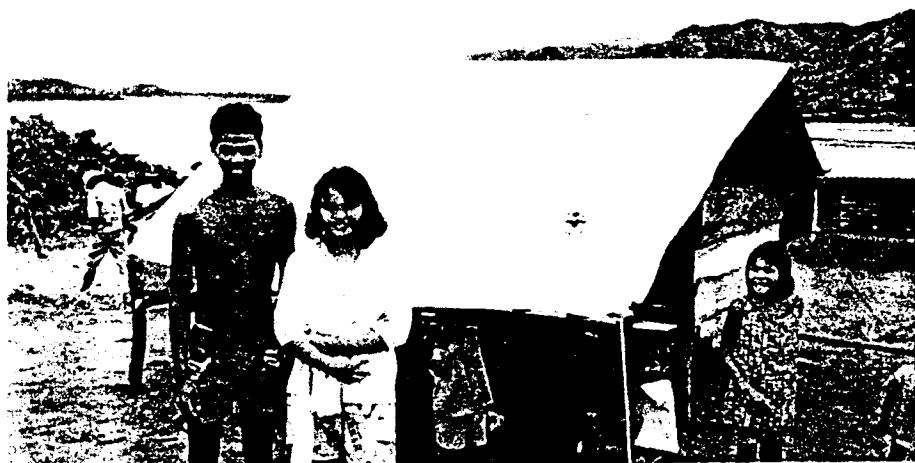


**Mounds of volcanic debris outside a home
in Concepcion City, the Philippines**
Photos by Raymond Dionne, AID/FHA/OFDA

**Aerial view of river course near Mt. Pinatubo
shows washed out bridge**



**Check dams built to slow and channel the debris
flow from lahars, the Philippines**



**OFDA plastic sheeting is used as roofing material by Filipino family displaced by
Mt. Pinatubo's eruption**
Photo by Larry Birch, AID/PRH/PS



A woman dips water from the muddy floodwaters surrounding her home in Cambodia

Photo courtesy of U.S. Committee for Refugees



Mrs. Marilyn Tucker Quayle helps out at a CARE distribution center in Bangladesh

Photo by Patrick W. Moore



A mother sits with one of her surviving children in a shelter in Bangladesh. She lost her husband and two children in the cyclone.

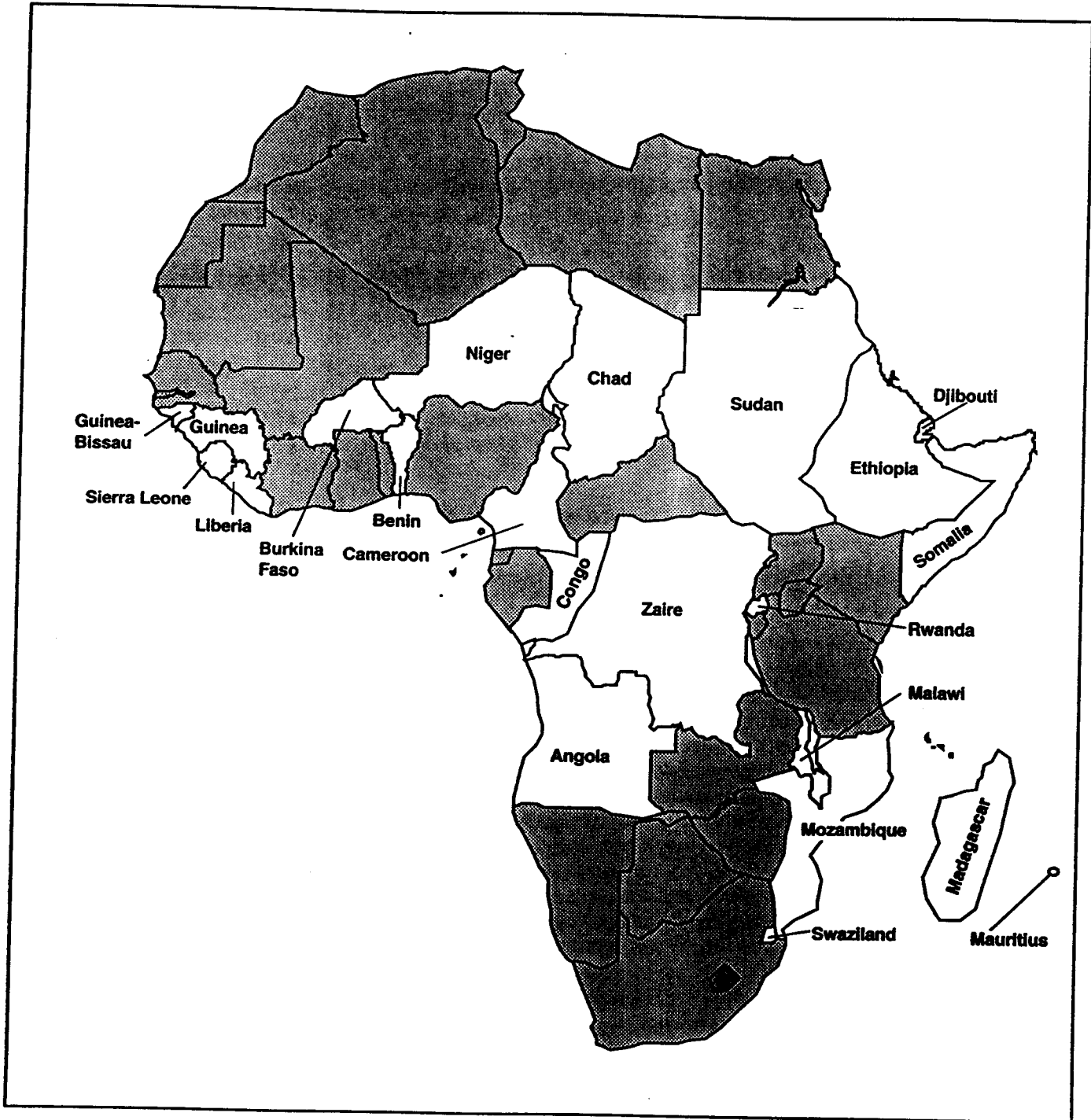
Photo by Patrick W. Moore



Children resting after the trauma of the Bangladesh cyclone

Photo by Patrick W. Moore

Africa



ANGOLA - Displaced Persons

| | |
|------------------------------|--|
| Date: | 1990-1991 |
| Location: | Displaced persons were dispersed throughout the entire country, but highest numbers reported in the provinces of Quanza, Sul, Huila, Benguela, Huambo, Moxico, Uige, and Cuando-Chimango. |
| No. Dead: | Unknown |
| No. Affected: | Total number of people requiring emergency assistance - estimated at 1,377,000, consisting of 827,000 internally displaced persons, 300,000 Angolan refugees, and 250,000 demobilized military personnel and their families. |
| Total USG Assistance: | \$28,753,462 |

The Disaster

The war between the Government of the People's Republic of Angola (GPRA) and the insurgent National Union for the Total Independence of Angola (UNITA) finally came to an end in May 1991. The 16-year civil conflict had a devastating impact on the people and economy of Angola. The United Nations estimated that since 1980, over 500,000 Angolan children had died directly or indirectly as a result of the war. In 1991 Angola had one of the highest child mortality rates in the world, with an estimated 292 out of every 1,000 children dying before the age of five. Furthermore, approximately 50,000 children were abandoned or orphaned by the war. Over one million people fled from their homes to escape the constant fighting. Most lived in squalid, overcrowded refugee camps in Zaire, Zambia, Namibia, or amongst the internally displaced. The United Nations estimated that the war cost Angola over \$20 billion in damage.

The war also devastated Angola's once bountiful agricultural sector. Most of the more than one million persons displaced from their land were farmers. The war disrupted local commerce and transport and destroyed much of the nation's road and railway network. In addition to the effects of civil war, a four-year drought cycle (1986-1990) drastically reduced domestic food production throughout the country. Despite adequate rains during the 1990-1991 rainy season, a shortage of

seeds and other agricultural inputs resulted in another below normal harvest.

At the end of 1990, the United Nations estimated that 1.9 million Angolans required emergency assistance. With the end of the war and the return of the rains, the United Nations revised its estimate for the affected population to include 827,000 internally displaced Angolans, 300,000 refugees expected to return to Angola, and 250,000 demobilized soldiers and their families in need of short-term or medium-term assistance in order to return to their places of origin or resettle in more productive areas.

Relief Efforts

After months of negotiations with the two warring parties, the United Nations announced that the Special Relief Programme for Angola (SRPA) had been accepted by the GPRA and UNITA in October 1990 (see FY 1990 OFDA Annual Report). This cleared the way for the implementation of cross-line and cross-border relief operations under the auspices of the United Nations. The NGOs working in Angola had to sign letters of association with the United Nations before they could participate and transport supplies under the SRPA aegis. In November 1990, the first U.N.-flagged convoy carrying relief supplies arrived in Huambo province. U.N. officials coordinated with UNITA and the GPRA to ensure that U.N.-flagged relief convoys were not attacked and roads were de-mined.

The ICRC had already begun its own relief operations, independent of the SRPA, sending relief convoys and transporting food and supplies from Lobito and Windhoek, Namibia, to several locations in GPRA and UNITA-held territory. The ICRC also commenced cross line airlifts of relief supplies using Twin Otter aircraft. Between October and early December, ICRC succeeded in delivering several hundred tons of food and supplies, including 120 tons of relief supplies into UNITA territory. In early December, however, UNITA revoked ICRC's cross-line and cross-border privileges to deliver relief supplies into contested areas.

On Dec. 21, the GPRA informed the U.N. Special Coordinator for the SRPA that all cross-line and cross-border relief operations were to be suspended due to a UNITA attack on a bridge in Huila Province that was

being used by both relief convoys and GPRA military trucks. The GPRA suspended the SRPA just before the first U.N.-flagged convoy was to depart for UNITA territory. Months passed without any progress towards the resumption of the SRPA. The United States and several other donors temporarily halted the purchase and shipment of all food to Angola in an effort to pressure the GPRA to acquiesce. The United Nations unsuccessfully sought concessions from both sides in an effort to resume operations. Meanwhile, political negotiations were taking place in Lisbon, Portugal, between the GPRA and UNITA, with the facilitation of the governments of Portugal, the United States, and the former Soviet Union. Finally, on March 28, the SRPA officially resumed when four convoys carrying relief supplies were permitted to start out for affected areas in both GPRA and UNITA territory. CARE, WVRD, and IMC were permitted to transport food and relief supplies aboard U.N.-flagged convoys and aircraft to both sides of the conflict.

On May 31, President Jose Eduardo dos Santos of the GPRA and Jonas Savimbi, leader of UNITA, signed a peace agreement, ending the 16-year civil war. The accords called for the establishment of a unified armed force, a multiparty system, a market economy, and free elections to be held in late 1992. In June, the USG opened the U.S. Liaison Office in Luanda to assist in the monitoring of the ceasefire as a participant on the Joint Political and Military Commission. With the successful enforcement of the nationwide ceasefire, cross-line and cross-border relief operations accelerated. Nevertheless, the initial momentum had been lost, and SRPA fell far short of its food delivery goals. Between July and October, SRPA reported that only 7,500 MT of relief supplies were delivered by road and air under the U.N. program. The movement of thousands of internally displaced persons further complicated the targeting of affected populations. Another affected group was created when approximately 250,000 soldiers and dependents, who had belonged to the GPRA and UNITA armed forces, were suddenly "demobilized" and required food, shelter, and relief supplies. On Oct. 3, the United Nations launched a special appeal for \$27.3 million to specifically address the needs of the demobilized military personnel.

Assistance Provided by the U.S. Government

On Oct. 2, 1990, Assistant Secretary of State for African Affairs, Herman J. Cohen, issued a disaster declaration for Angola for the third year in a row. To show its support of the SRPA, OFDA immediately allocated \$500,000 to UNICEF, \$500,000 to WFP, and \$300,000 to UNDP for each of their emergency assistance programs in Angola. OFDA also allocated grants to six U.S. PVOs working under the SRPA umbrella. Africare operated a supplementary feeding project in Cuanza Sul Province, displaced persons resettlement programs in Bie and Cuanza Sul, and an orphan assistance project. In Benguela Province, CRS managed a food distribution program in cooperation with local Catholic organizations. IMC transported and distributed food, seeds, and tools, managed a well drilling project, and conducted an expanded immunization program in Cuando Cubango. CARE delivered food to affected areas in Huila and Cuando Cubango provinces, while WVRD also transported and distributed food and relief supplies into southern Angola. Finally, Air Serv provided air service to transport personnel and goods under the SRPA aegis. The suspension of the SRPA severely delayed critical deliveries of food and seeds during the "lean" planting season of December through March. Once the SRPA was reinstated, poor road conditions in the southeastern region of the country necessitated that OFDA fund expensive airlifts of supplies for IMC, WVRD, and CARE from staging points in Namibia.

In June, OFDA hired veteran relief consultant, Dwight Swartzendruber, to serve as an emergency and disaster relief coordinator based in Windhoek, Namibia. His role became increasingly valuable to OFDA in reporting on developments from the field, and facilitating coordination between U.N. agencies in Luanda and Windhoek and various NGOs and donor organizations. OFDA also hired consultant Charles Smith to evaluate various logistical options into southern Angola. In addition, a water engineer was hired to assess potable water needs in the area around the town of Jamba, prior to implementation of the IMC well drilling project.

In FY 1991, FFP allocated 9,346 MT of food to CRS, 6,600 MT to WVRD for its food distribution program, 9,465 MT to CARE for distribution in southern Angola, and 1,562 MT set aside for the International Emergency

Food Reserve. Total value of the 26,974 MT of food and transport was \$15,102,000.

RP contributed \$595,750 to ICRC for its orthopedic and prosthetics program for war-injured refugees and amputees.

Summary of USG Assistance

OFDA Assistance

| | |
|--|-------------|
| Grant to UNICEF | \$500,000 |
| Grant to WFP | \$500,000 |
| Grant to UNDP | \$300,000 |
| IMC immunization project..... | \$1,265,956 |
| IMC seed and tools project | \$1,744,642 |
| IMC emergency airlift | \$1,059,910 |
| IMC well project..... | \$557,052 |
| Grant amendment to CRS..... | \$731,973 |
| Grant to Air Serv | \$396,540 |
| Africare Cuanza Sul supplementary feeding project..... | \$236,908 |
| Africare Waku Kundu DP project..... | \$468,811 |
| Africare Bie DP resettlement program..... | \$341,168 |
| Africare orphan assistance project..... | \$189,000 |
| CARE food distribution projects | \$1,915,566 |
| WVRD food/seeds/tools distribution projects..... | \$2,712,722 |
| Logistical Assessment mission | \$19,943 |
| Water Assessment mission | \$15,007 |

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|-------------------------------|---------------------|
| OFDA Relief Coordinator | \$98,854 |
| Travel expenses..... | \$960 |
| Total OFDA | \$13,055,012 |
| Total FFP..... | \$15,102,000 |
| Total RP | \$595,750 |

TOTAL \$28,752,762

Assistance Provided by U.S. Voluntary Agencies

ADRA - distributed clothing to displaced persons and amputees.

Africare - managed four relief projects in Angola: daily supplementary feeding to children and pregnant women in Cuanza Sul; assistance to displaced persons in a Waku Kundu area of Cuanza Sul; distribution of food, blankets, and basic necessities to approximately 4,000 war orphans; and assistance to displaced persons in Bie Province.

CARE - transported and distributed food to affected populations in southern Angola.

CRS - delivered food in Benguela Province, in cooperation with local Catholic organizations.

IMC - directed four relief activities in Cuando Cubango Province: airlifted seeds, tools, food, and medicine from Namibia into towns of Likuwa and Luiana; distributed seeds and tools to 20,000 displaced families, along with food supplied by WVRD and CARE; administered 50,000 immunizations for measles, polio, diphtheria, pertussis, and tetanus; and drilled wells to provide potable water to the Jamba area.

LWR - assisted displaced persons in Moxico and Lunda Sul provinces.

WVRD - airlifted or trucked in food from Namibia into Huambo and Cuando Cubango Provinces, and distributed the food and seeds, tools, blankets, and clothes in both locations.

THAILAND - Typhoon

Date: Nov. 4-5, 1989

Location: Southern provinces, especially Chumphon

No. Dead: 534

No. Affected: 30,000 to 45,000 families homeless (about 150,000 to 225,000 people)

Total USG Assistance: \$225,000

The Disaster

Typhoon Gay cut a path of destruction through several southern provinces of Thailand on Nov. 4-5. Winds up to 120 km. per hour generated waves estimated at 12-18 meters (40-60 feet) in the Gulf of Thailand. Typhoons are rare in Thailand, and this storm was reportedly the worst to hit the country in 35 years. Chumphon Province bore the brunt of the storm, with the districts of Muang, Pa Thieu, and Tha Sae being the most seriously affected. Adjacent provinces suffered significant but less catastrophic damage. The typhoon occurred at the height of the monsoon season, and the continuing heavy rains over several weeks hampered the relief effort.

Throughout the region, some 40,738 housing units were damaged or destroyed, leaving 30,000 to 45,000 families homeless; and over 470 public buildings, including schools, hospitals, and temples and mosques, were damaged. The storm also disrupted power and communications and washed out roads and bridges. As of Nov. 9, about 10,000 people still remained isolated except by helicopter airlifts. Train service between Bangkok and points south of Chumphon was interrupted. Damage to agriculture was extensive, including the loss of much of the local fishing fleet, over 1 million rais of crops (about 167,000 ha.), and 88,490 animals.

Although there had been four to five day's warning time as the storm approached, winds of such high velocity had not been anticipated and the fishing fleet went out to sea as usual. An estimated 580 vessels sank, including the 600 ft. UNOCAL drilling ship which capsized with the loss of 91 crewmen. In all, 534 people died as a result of Typhoon Gay, most of

them fishermen. Total storm damage reached about \$452 million.

Action Taken by the Royal Thai Government (RTG) and Non-Governmental Organizations

The RTG mobilized all available resources of food, temporary shelter, and medical supplies to respond to the needs of the storm victims. Prime Minister Chatchai Choonhavan visited Chumphon Province to observe relief operations firsthand. UNOCAL and Royal Thai navy ships and aircraft searched for survivors of the capsized UNOCAL drilling ship.

The RTG allocated an initial amount of 500 million baht (\$19,267,800) as compensation to families who had lost homes and property. Those whose homes had been destroyed were promised a grant of 25,000 baht (about \$963) and families whose homes had been partially damaged were to receive 15,000 baht (about \$578). Collection boxes for donations for the homeless were set up throughout the southern provinces. On Nov. 17, the RTG requested international assistance through UNDRO.

Various government ministries contributed to the relief and rehabilitation effort: the Public Health Ministry provided medical services to prevent epidemics; the Agriculture Ministry allocated funds to repair damaged vessels; and the Ministry of Commerce sent food and other items and instructed officials to control consumer prices in the aftermath of the storm. The Department of Public Welfare (DPW) purchased and distributed the roofing sheets paid for by OFDA. Some 600 tents donated by the USG to Nakon Si Thammarat Province during the flood disaster of FY 1989 were transferred to Chumphon Province for reuse as temporary shelter (see *OFDA FY 1989 Annual Report*, "Thailand Floods").

By Dec. 2, work crews had reestablished the main power and communication links in the affected area, and the governor's office, district offices, and police stations were also back in use. Considering the fact that Thailand had suffered two major natural disasters within about a year, the Prime Minister announced the creation of a National Task Force to coordinate relief operations in future emergencies. The task force was approved at a Nov. 14 Cabinet meeting.

Ambassador Daniel A. O'Donohue declared a disaster on Nov. 6 and released \$25,000 from his Ambassador's authority to provide immediate relief assistance. The funds were used for the local purchase of food, water, clothing, and temporary shelter materials.

On Nov. 16, USAID/Bangkok requested a further OFDA donation of \$150,000. Of this amount, \$100,000 would go to WVRD for a relief program to assist 3,000 families and \$50,000 would go to the DPW for more roofing material. OFDA supported the Mission's recommended activities.

A Mission team comprising the USAID Deputy Director and the USAID engineer made a follow-up visit to Chumphon on Dec. 2, accompanied by the president and staff members of WVRD/Thailand. The team traveled by RTG helicopter on Dec. 2 and by car on Dec. 3 to observe relief efforts in the three hardest-hit districts. The team met with the Governor, a DPW officer, and several district officials and villagers. At that time, relief efforts had focused primarily on the provision of food and subsistence supplies; however, the team noted that the USG-donated roofing materials had been widely distributed.

CRS - provided medical services from a mobile medical team in southern Thailand that normally assists the Indochinese refugee population. The assistance was valued at \$2,500.

WVRD - administered a USG grant and provided \$75,000 from their own resources to assist some 3,000 families with temporary shelter, food, clothing, water containers, and transport.

UNDRO - appealed for international assistance on behalf of the RTG and donated \$30,000.

OTHER ASIA DECLARED DISASTERS

BURMA - Fires

Fires ravaged the cities of Meiktila on Feb. 1, 1990, and the capital, Rangoon, on Feb. 3. In Meiktila, the blazes gutted an estimated 800 houses, left about 4,370 people homeless, and caused some \$2.5 million in property damage. Fire destroyed between 400 and 600 residences, leaving 3,614 victims homeless in Rangoon.

The Government of Burma (GOB) provided immediate relief in the form of temporary shelter, blankets, and other household utensils to the victims. GOB officials resettled them in new locations, mostly at government expense.

Following discussions with Burmese officials and other donors, Ambassador Burton Levin determined on Feb. 8 that the fires had resulted in disasters of such magnitude that the Burmese government was unable to adequately cope with the relief requirements. The USG donation of \$15,700 was provided in local currency to the Burmese Red Cross (BRC) for necessities for the displaced people. The BRC turned the money over to respective regional representatives of the central government, who then gave the money to township-level fire relief committees. The USG donation was placed in a common fund with other contributions and was used to rebuild roads, schools, and other infrastructure destroyed by the fire.

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| TOTAL USG | \$15,700 |
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PEOPLE'S REPUBLIC OF CHINA - Floods

A series of violent and prolonged rain storms in June 1990 resulted in widespread flooding in Hunan Province. The continuous rainfall between June 1 and 16 caused water levels to rise dangerously in 82 counties. New storms in late June increased the magnitude of damage, bringing the total number of counties affected to 88 and the total number of people affected to 26 million. The casualty figures included 363 dead, 5,805 injured, and at least 125,000 homeless. The agricultural sector suffered heavy losses, with 1 million hectares of crops destroyed and over 16,000 head of cattle killed. Damage to infrastructure – roads, bridges, reservoirs, power lines and power stations, schools, factories, and shops –

was also extensive. The direct economic loss was estimated at \$592 million.

The Government of the People's Republic of China (GPRC) organized at all levels to respond to the emergency. Over 7 million local people, joined by soldiers and police officers, worked around the clock to conduct rescue operations. As of June 23, the government at the national and local levels had paid over \$6.3 million and given out 15.9 million kilograms of grain to resettle and provide for the flood victims. The GPRC indicated through the UNDP/UNDRO representative that it would welcome international assistance, citing a special need for grain, blankets, clothing, medical equipment, fuel, steel, and fertilizers.

The U.S. Embassy received reports from the GPRC Ministry of Civil Affairs describing the severity of the floods. After learning that the GPRC would welcome assistance from foreign governments, U.S. Ambassador James R. Lilley made a disaster determination on July 5 to release \$25,000 from his disaster assistance authority for the relief effort. The funds were earmarked for the purchase of blankets and medical supplies.

Other international donors contributed a reported total of \$455,000. The EC gave \$225,000; UNDP provided an emergency grant of \$50,000; and Japan furnished tents, blankets, medical kits, generators, water tanks, and water purifiers, all valued at \$180,000.

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| TOTAL USG | \$25,000 |
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INDIA - Cyclone

The most destructive cyclone to hit India since 1977 lashed coastal districts of the eastern state of Andhra Pradesh on May 19, 1990, with 150 km. per hour winds. Hardest hit were the five districts of Guntur, Krishna, East Godavari, West Godavari, and Visakhapatnam. About 3,000 villages and at least 2.6 million people were affected by the storm.

Although the number of fatalities reached 957, with the majority from Guntur and Krishna districts, the death toll was far lower than in the 1977 disaster when an estimated 10,000 died. Advance notice of the

storm and mass evacuations (about 150,000 people) were credited with the relatively low loss of life.

Estimated damages were much higher, however, than in the 1977 event because of the wider area affected and the greater intensity of the storm. About 670,000 houses were destroyed or damaged by the high winds and flooding, although *pucca* houses (those of solid construction) generally withstood the storm's ravages. The agricultural sector sustained serious damage with over 295,000 ha. of crops (paddy, pulses, sugarcane, fruits, and vegetables) affected and the loss of at least 6,000 cattle, 5,000 sheep and goats, and 3 million poultry. Power, communication, and transportation links were temporarily disrupted, and water sources were contaminated. The preliminary damage figures were put at \$3 billion for crops and \$450 million for public and private property.

Both the central and state governments mobilized quickly to respond to the needs of the cyclone's victims. Prime Minister V. P. Singh conducted aerial inspections on May 12 and made a ground tour on May 19. The Government of India (GOI) allocated \$50 million for cyclone relief in Andhra Pradesh, and the crisis management group in the GOI Department of Agriculture met regularly to monitor the situation and extend assistance. Aircraft, helicopters, ships, and personnel from the armed forces were deployed in large numbers to conduct relief and rescue operations. Over 1.6 million food packets and other essentials were distributed in the affected areas in the days following the disaster. Utility workers acted quickly to clear away fallen trees and debris and restore transportation, power, and communication service. About 1,100 medical and paramedical teams launched immunization operations to prevent outbreaks of epidemics.

The Government of Andhra Pradesh (GOAP) hoped to mitigate the effects of future cyclones by a reconstruction program to provide *pucca* dwellings in the affected communities. The state also announced plans to subsidize the cost of land reclamation for small and marginal farmers whose crops had been destroyed or whose land had been salinized by seawater intrusion. The GOAP distributed gypsum to desalinize the soil.

U.S. Ambassador William Clark, Jr., determined on May 11 that the cyclone in Andhra Pradesh State constituted a disaster warranting a USG response. He made available \$25,000 from his disaster assistance authority as a contribution to the Prime Minister's National Relief Fund. At the request of CRS/Madras, the USAID Mission authorized CRS to divert up to 250 MT of P.L. 480 Title II commodities from its regular program stocks for emergency feeding of the cyclone victims in Guntur District.

WVRD also provided assistance and had reached about 12,000 families by May 31, at a cost of \$156,875, with donations of food, blankets, clothing, and utensils. Some 35 to 40 volunteers employed by partner agencies and 15 WVRD/Madras staff participated in the relief operations.

TOTAL USG

\$25,000

INDONESIA - Floods

During the final week of January 1990, torrential monsoon rains fell on Central Java Province, severely inundating the districts of Semarang, Batang, Temanggung, and Kendal. According to media reports, 215 mm. of rain fell between Jan. 26 and 27, resulting in the worst flooding in two decades. In Jayapura, a landslide caused by heavy rains buried 17 persons. Another landslide in Temanggung claimed 33 lives. In all, 171 people were killed, 24,000 affected, and 8,500 houses damaged or destroyed. In addition, approximately 12,000 ha. of agricultural land were flooded.

The Central Java provincial government rushed rice, medical supplies, and tents to the flood-affected areas. Local police forces recovered the dead and injured from the numerous landslides. The Department of Social Affairs helped set up relief camps to provide food and shelter to evacuees. The Department of Public Works allocated \$277,000 for emergency repair of dikes and other infrastructure damaged by flood waters. The Indonesian Red Cross donated seven tons of rice and 2,000 pieces of clothing. The private sector collected over \$166,000 in cash and in-kind contributions.

The governments of Japan and South Korea contributed \$25,000 and \$20,000 respectively, and the Taipei Chamber of Commerce made a cash donation of \$20,000.

INDONESIA - Volcanic Eruption

The early warning provided by VSI and the rapid evacuation coordinated by the East Java provincial government no doubt saved hundreds of lives. The relief camps set up in the nearby towns of Blitar, Kediri, and Tulungagung provided food, shelter and clothing to the 43,000 evacuees. The government's Department of Social Affairs (DEPSOS) committed 439 million rupiahs (about \$245,000) for immediate relief assistance and private donations surpassed \$593,000. The East Java provincial government allocated \$610,000 for relief and rehabilitation programs.

TOTAL USG \$25,000

South Korea experienced the worst flooding in its recent history after three days of continuous downpours beginning Sept. 9, 1990. The Han River rose 11 meters in the capital city of Seoul and swamped large areas of farmland near Koyang-gun, west of Seoul. Thousands of people were driven from their homes and took refuge in temporary shelters. In the hardest-hit provinces of Kyonggido (surrounding Seoul), Kangwondo, and Chungchongbukdo, the floods left 127 people dead, 80 missing, 27 injured, and 189,233 homeless. Property damage was estimated at \$38 million and included 1,420 buildings destroyed and over 42,000 damaged or submerged. Figures for crop damage were not available, but at least 56,000 ha. of farm land were inundated.

U.S. Ambassador Donald P. Gregg issued a disaster declaration on Sept. 12 and committed \$25,000 from his disaster assistance authority to present a check to the Korean Red Cross. The funds were used to purchase blankets, sets of kitchen utensils, and gas

Other donors from the international community included the United Kingdom which responded with a \$31,784 emergency relief donation. British servicemen – part of the U.N. Honor Guard – helped with clean-up operations in Seoul, and children in the Seoul British School raised \$3,381 in donations.

PHILIPPINES - Emergency

President Aquino's forces had recovered all rebel-held military bases and the television stations by Dec. 1, but the fighting persisted as rebel troops blasted army headquarters at Camp Aguinaldo and occupied positions in hotels and high-rises in Manila's financial center, the Makati district.

Street fighting during the period of civil disturbance threatened the safety of civilians and prevented the movement of food, medicine, and medical personnel to areas of need. Casualties mounted during the week-long mutiny. The official death toll, many of them civilians, was 119; some 600 people were wounded.

This was the sixth coup attempt since President Corazon Aquino came to power after a joint civilian-military uprising in February 1986 forced President Ferdinand Marcos into exile.

In view of the widespread injuries resulting from the coup attempt, U.S. Ambassador Nicholas Platt issued a disaster declaration on Dec. 4 and released \$25,000 from his disaster assistance authority to support the work of the PNRC. The funds were to be used for the purchase of food, medicine, gasoline for vehicles, and other emergency supplies. Other USG assistance came from Clark AFB which provided 1,000 pounds of medical supplies to the V. Luna Hospital (value not included in total).

PHILIPPINES - Floods

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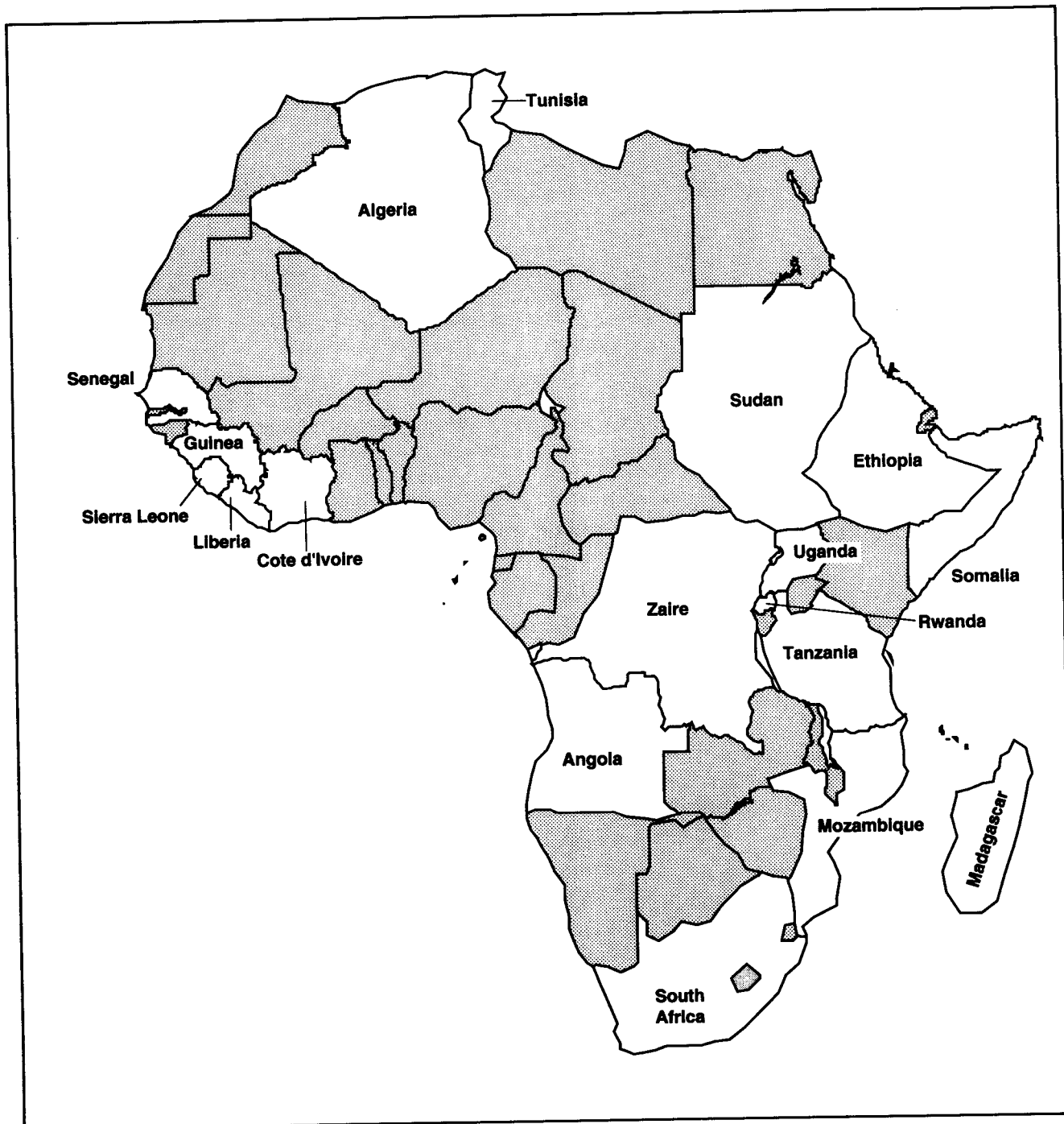
50,000 people) in the capital had fled their homes for higher ground. Landslides triggered by the heavy rains caused at least 15 deaths in the northern Luzon districts of Nueva Vizcaya and Nueva Ecija. Thirteen deaths in the NCR were mostly from drowning.

Government of the Philippines (GOP) disaster response agencies carried out relief efforts; schools and churches were made available as temporary shelters. However, GOP personnel, materials, and equipment were strained due to the ongoing response to the earthquake disaster of five weeks earlier.

The U.S. Charge d’Affaires determined on Aug. 25 that USG assistance was warranted in view of the severity of the flooding and the constraints under which GOP disaster relief agencies were operating. He exercised his disaster assistance authority to donate \$25,000 to Caritas/Manila for the immediate relief needs of the flood victims.

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| TOTAL USG | \$25,000 |
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Africa



ALGERIA - Earthquake

Date: Oct. 29, 1989

Location: Northern Algeria, especially the region of Chenoua, between the towns of Tipaza and Cherchell

No. Dead: 27

No. Affected: Over 12,000 homeless; 162 injured (300 unofficially)

Total USG Assistance: \$92,953

The Disaster

At 8:09 p.m. on Oct. 29, 1989, the region of Chenoua in northern Algeria was jolted by an earthquake registering 6 on the Richter scale. Two quakes of lesser magnitude (3.6 and 4.8) followed within 20 minutes. Most of the 27 deaths reported occurred in the small town of Nador and its immediate surroundings. The official figure for the number injured was 162, although unofficial reports put the number closer to 300.

The earthquakes caused extensive damage to housing stock, especially to earthen and unreinforced masonry (stone rubble and brick) structures. Over 4,000 buildings, including most schools in the area, were too severely damaged to be repairable; numerous others sustained cracks or had some degree of structural damage. In Hadjout and Nador villages, 50% of homes were destroyed or damaged, and in Cherchell, the casbah (the old town center, formed by courtyard houses) was too badly damaged to be rehabilitated. Continuing aftershocks, felt even in Algiers some 60 km. northeast of the epicenters, forced more people into the streets in the days following the earthquakes. The number of homeless proved to be greater than initially estimated because many of the buildings housed four or five families. UNDRO estimated in late November that at least 12,000 victims would have to spend the winter in tents.

Lifelines were also affected by the earthquake. An ocean highway linking Tipaza and Cherchell was rendered impassable, and three bridges were damaged. Electric and telephone service was cut temporarily, hampering the rescue effort. A water

shortage before the earthquake was even more acute after the temblor, with lower water levels in the reservoirs.

Action Taken by the Government of Algeria (GOA) and Non-Governmental Organizations

Prime Minister Hamrouche and the ministers of health and interior traveled immediately to the disaster site to assess damage. The Office of the President coordinated rescue efforts and reconstruction. Local government officials, assisted by the Algerian Red Crescent (ARC), handled relief and rehabilitation. Assessment of damage and relief efforts were hampered, however, by the difficulty of access to the region. The destruction of roads and bridges rendered access possible only by air and there was a shortage of aircraft.

The ARC mobilized its staff and resources and alerted relief agencies of needs through LRCS. The ARC specifically asked for tents, blankets, children's clothing, glucose and saline solutions and dispensing sets, and LRCS emergency kits. As of Nov. 7, the ARC had distributed 5,372 tents, 600 of them from the ARC's own supplies; however, the ARC director reported that an additional 2,000 were needed because the tents that had been given out were sheltering more people than they were designed to hold and many of them were not suitable for winter weather.

The Algerian Astrophysical, Astronomical, and Geophysical Research Center (CRAAG), after determining the earthquake's epicenters, inspected the affected villages and worked with a French seismic team to study the possibility of future earthquakes. A damage survey was also conducted by the Agency for Technical Control of Construction and the Center for Seismic Engineering Research. The aim of the survey was to determine damage and plan shelter reconstruction. The GOA requested aid by UNDRO and the UNDP to update and improve ORSEC (Organisation des Secours) national and regional plans.

Assistance Provided by the U.S. Government

On Nov. 16, U.S. Ambassador Christopher W. S. Ross determined that USG assistance was warranted

and could fill a vital need for appropriate shelter for the upcoming winter. Although OFDA had 400 tents available in its stockpile, the tents were not appropriate for cold weather. OFDA requested that UNDRO locate and procure 180 winterized family (10-persons) tents and transport them along with 5,520 blankets to Algiers for the earthquake victims. A Belgian Air Force cargo plane flew the goods to Algeria, arriving on Nov. 18. The ARC off-loaded the tents onto three trucks and distributed the supplies. OFDA provided a grant of \$92,953 to UNDRO to cover the cost of the emergency operation.

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| TOTAL | \$92,953 |
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Assistance Provided by the International Community

International Organizations

IDNDR (International Decade for Natural Disaster Reduction) secretariat approached donors for funding for an awareness drive for the Algerian public, the development of a media kit, and a workshop with local authorities/town planners and national/foreign specialists in earthquake engineering to reiterate possibilities of earthquake-resistant reconstruction of low-cost housing.

LRCS - sent a delegate to help the ARC assess needs.

UNDRO - provided 200 tents, organized the purchase and shipment of USG-donated supplies, and arranged the 2-plane airlift of Italian blankets and tents.

UNDRO/SEISMED (the cooperative project for seismic risk reduction in the Mediterranean region) - dispatched a team for a week to provide technical assistance.

Governments

Denmark, the Netherlands, and Turkey - jointly contributed 350 tents.

France - sent a seismic team to assist CRAAG in determining the possibility of future earthquakes and conducting related research.

Italy - provided 200 15-person, heavy-duty tents, 10,000 blankets, 200 rolls of plastic sheeting (400 sq. meters each), 240 family kits, 750 kitchen sets, and 2,400 jerrycans, all valued at \$400,000. The airlift was organized by UNDRO and the transportation costs for the second flight were borne by the OPEC Fund.

Japan - furnished \$20,000.

Non-Governmental Organizations

OPEC Fund - channeled \$46,000 through UNDRO for the cost of the second B-707 aircraft to transport relief supplies donated by Italy.

Note: As of Dec. 8, UNDRO reported that total international donations in cash and kind exceeded \$1,500,000. This total presumably includes the USG donation which, to avoid double counting, is not included here.

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| TOTAL | \$1,405,000 |
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ANGOLA - Drought/Displaced Persons

Date: 1989-1990

Location: Provinces of Cuanza Sul, Benguela, Huambo, Bie, Namibe, Huila, Cunene, Cuando Cubango, and Moxico.

No. Dead: Unofficial estimates ranged as high as 10,000 as of September 1990.

No. Affected: The United Nations estimated the number of people requiring emergency assistance due to drought at 1.9 million as of September 1990. Approximately 1 million people were displaced nationwide, including 460,000 displaced persons residing in the nine drought-affected provinces.

Total USG Assistance: \$10,480,402

The Disaster

Since 1975 a long and bloody civil war has been fought between the Angolan government, under the control of the Popular Movement for the Liberation of Angola (MPLA), and the insurgent National Union for Total Independence of Angola (UNITA). The war has ravaged the country, displacing almost 1 million Angolans and causing Angola to have one of the highest infant and child mortality rates in the world. Since 1979, UNITA has effectively controlled the southeastern quarter of the country, encompassing the sparsely populated provinces of Moxico and Cuando Cubango.

In 1990, rainfall in central and southern Angola was below normal for the fourth consecutive year and agricultural production had been reduced by 75% in the region. Many river beds in the southern provinces dried up and over 440,000 head of cattle died due to the drought. It was reported that many southerners subsisted on seeds and roots in order to stave off starvation. Ten thousand people were reported to have died of malnutrition or disease in Benguela Province alone in 1990 and thousands of fatalities went unreported. An increase in the number of cases of measles, cholera and tuberculosis was reported throughout Angola, causing an alarming number of deaths among people already weakened by malnutrition.

The affected population was divided between people residing in territory controlled by the MPLA and territory held by UNITA in the southeastern corner of the country. In the early months of 1990 the military forces of the MPLA launched an offensive into UNITA territory, which stalled outside the UNITA outpost at Mavinga. Guerrilla attacks by UNITA throughout Angola made assessments and delivery of relief supplies difficult, if not impossible, in much of MPLA-controlled Angola. With the independence of Namibia in March 1990, the affected population in UNITA territory was effectively cut off from any overland deliveries into southeastern Angola.

Response to the Emergency

The Government of the Peoples Republic of Angola (GPRA) was unprepared for mounting a nationwide emergency relief program. The GPRA Emergency Unit (UTA-E) lacked the full-time staff and resources to fulfill its role as the government body responsible for coordinating the dissemination of information. The GPRA's State Secretariat for Social Affairs (SEAS) was only able to deliver relief supplies to displaced persons living in or near MPLA-controlled cities. Thousands of tons of food channeled through UNICEF and WFP were left undistributed, rotting at the ports in Luanda and Lobito.

Angola, unlike most of the other African countries facing disasters, had very few private foreign relief organizations active in the country. In 1982, the ICRC began airlifting relief supplies to needy populations living in the Planalto Region of Benguela, Huambo, and Bie provinces. Beginning in late 1988, ICRC began the first distribution of non-food items (clothing, blankets, and seeds) in UNITA-held territory. ICRC was the only relief organization with access to both sides in Angola.

In February 1990, a mission composed of representatives of the GPRA, the U.N., and two non-governmental organizations conducted a drought assessment in the MPLA-controlled provinces of Benguela, Huila, Namibe and Cunene. The assessment team estimated that approximately 782,000 people were affected by the drought and found the agricultural, water, and nutritional conditions to be critical. In May, the U.N. Secretary General launched

an international appeal for 49,500 MT of food aid and UNICEF appealed for \$5.28 million to support its relief and rehabilitation programs in MPLA-controlled Angola.



These villagers in southeastern Angola had been displaced by war

Photo by William Garvelink, AID/OFDA

However, these appeals did not include plans for assistance to the estimated 150,000 people at risk in UNITA territory. In early July, OFDA Director Andrew Natsios sent letters to U.N. Under Secretary General Abdulrahim Farah and UNICEF Executive Director James Grant requesting that the United Nations attempt to provide relief assistance to drought victims on both sides of the conflict in Angola. Later in the month, State Department officials raised this issue with GPRA President Dos Santos during a visit to Luanda. About the same time, Dr. Jonas Savimbi, President of UNITA, publicly proposed establishing "corridors of peace", recognized relief routes that could be used to deliver relief supplies without threat of attack. The GPRA initially reacted to this proposal with suspicion and rejected plans to conduct cross border relief operations into southeastern Angola.

On Aug. 11, a high level U.N. delegation, led by Under Secretary General Farah visited Luanda and discussed with GPRA President Jose Eduardo dos Santos and other GPRA officials the need to expand U.N. relief operations to cover all provinces severely affected by the drought and war-related famine. After obtaining a commitment by the GPRA to proceed, the

U.N. delegation prepared a draft plan of action entitled the "Special Relief Programme for Angola" (SRPA) and presented this plan to the GPRA on Sept. 3. The U.N. increased its estimate of the number of people requiring emergency assistance to 1.9 million.

Following the presentation of the SRPA, a USG team headed by OFDA Director Natsios traveled to southern Africa to promote acceptance of the plan. During its visit to Luanda, the team met with various donor representatives who confirmed the severity of the drought. The team then visited UNITA-controlled Angola and noted high levels of malnutrition in several villages along the Zambian border. After leaving Angola, the team met with senior government officials in Botswana and Namibia concerning cross border operations into southern Angola. On Sept. 24, the GPRA and the U.S. government announced that cross border operations would be permitted through Namibia and U.N. representatives would have access to all parts of southern Angola. By mid-October, the U.N. received the endorsement of the SRPA by both the GPRA and UNITA. *(The continuing operations will be described in the FY 1991 OFDA Annual Report)*

Assistance Provided by the U.S. Government

OFDA first became involved in Angola in October 1988, when it sent a joint USG/PVO assessment team to explore the feasibility of U.S. PVOs working in the MPLA-controlled side of Angola. In FY 1989, OFDA provided a grant to ICRC to support its airlift of relief supplies to the Planalto region. *(See FY 1989 OFDA Annual Report)* Normally, before OFDA financial resources can be committed to an emergency situation, the USG Chief of Mission must declare a disaster in the affected country. Since the USG has no official or diplomatic presence in Angola, Assistant Secretary of State for African Affairs Herman J. Cohen redeclared a disaster on Oct. 13, 1989.

In FY 1990, OFDA funded four U.S. PVOs that began projects on the MPLA-controlled side of Angola. CRS began distributing food in Benguela Province in cooperation with local Catholic organizations. Africare and National Council of Negro Women (NCNW) attempted to implement relief projects in Cuanza Sul Province, but they were hampered by the

security situation. Finally, ADRA distributed clothing to displaced persons in MPLA-controlled Angola.

In early FY 1990, OFDA sent a second assessment team to southeastern Angola at the request of UNITA representatives. The team visited over 50 villages and conducted health examinations of over 1,300 people. The health assessment found that the population was at serious risk of death from preventable diseases, such as malaria and measles. The team also found that severe malnutrition was widespread among the displaced population. In March 1990, OFDA provided a grant to the U.S. PVO, International Rescue Committee (IRC), to procure anti-malarial medicines, such as chloroquine and quinine, and various medical supplies. Ten tons of medical supplies were flown into UNITA territory and were distributed to civilian health units.

In June, OFDA allotted \$2.1 million to ICRC for the purpose of delivering food, seeds, tools, and blankets to 30,000 families in Moxico and Cuando Cubango Provinces. OFDA had previously provided a grant to ICRC to airlift relief supplies to displaced persons living in the Planalto region in MPLA-controlled Angola.

In August, OFDA allocated \$437,822 for International Medical Corps (IMC) to manage an immunization project in southeastern Angola. The program immunized 50,000 children against measles, polio, diphtheria, and tetanus. During the second week of September, IMC doctors conducted a nutritional survey in eight UNITA villages and found that 79.1% of the sample showed some level of malnutrition, compared to 50.1% in the 1989 survey. Furthermore, moderate malnutrition increased from 4.4% in 1989 to 19.1% in 1990 and severe malnutrition increased from 1.1% to 9.9%.

At the end of FY 1990, OFDA provided a grant to the U.S. PVO Africare to provide basic necessities, such as blankets, bedding, eating utensils and other materials to approximately 4,000 orphans residing in Huambo, Bie, Cuando Cubango, Moxico and Malanje. This project was funded out of the Special Congressional Earmark Appropriation for Orphaned and Displaced Children.

Since 1981, A.I.D.'s Office of Food for Peace (FFP) has channeled approximately 100,000 MT of food, valued at over \$45 million to the MPLA-controlled side of Angola through international organizations such as UNICEF and ICRC. In FY 1990, FFP committed 5,606 MT to CRS for its distribution program in Benguela Province.

The State Department's Bureau for Refugee Programs (RP) provides funding to support ICRC's Africa-wide programs. In FY 1990, RP contributions to the ICRC Angola program were estimated at \$3.6 million, although funds were not specifically earmarked for Angola.

Summary of USG Assistance FY 1990

OFDA Assistance

| | |
|---|-------------|
| Grant to CRS for food distribution program | \$770,008 |
| Grant to Africare for health project | \$242,717 |
| Grant to NCNW | \$202,393 |
| Grant to Africare for Orphan project | \$196,046 |
| Support to IRC for UNITA assessment mission | \$52,169 |
| Grant to ADRA for clothing distribution and orthopedic training program | \$28,100 |
| Support for OFDA assessment mission | \$8,339 |
| Grant to IRC for airlift of emergency medical supplies | \$150,808 |
| Grant to ICRC to deliver food, seeds and tools | \$2,100,000 |
| Grant to IMC for child immunization project | \$437,822 |

FFP Assistance

5,606 MT of food to CRS \$1,942,000

Ocean Freight of 5,606 MT \$750,000

RP Assistance

Funding for ICRC Angola program \$3,600,000

Total OFDA \$4,188,402

Total FFP \$2,692,000

Total RP \$3,600,000

TOTAL **\$10,480,402**

Assistance Provided by U.S. Voluntary Agencies

ADRA - distributed clothing to displaced persons in MPLA-controlled Angola.

Africare - experienced difficulty implementing an emergency health project in Cuanza Sul due to the security situation. An Africare representative attended coordination meetings in Luanda and participated in several assessment missions. Africare also initiated an orphan assistance project in late 1990.

CRS - began distributing food in Benguela Province in cooperation with local Catholic organizations.

IRC - participated in assessment missions to UNITA territory and supervised airlift of medical supplies to Likuwa in March.

National Council of Negro Women - attempted to implement emergency health project in Cuanza Sul, in conjunction with Africare.

Assistance Provided by the International Community

International Organizations

EC - provided \$273,760 for a sanitation program implemented by MSF/Belgium. In September, the EC announced that it was temporarily halting shipment of 20,000 MT of food due to the poor management at the port at Lobito.

FAO - donated \$800,000 in food assistance.

ICRC - distributed 6,000 MT of food, seeds, blankets, and clothes to approximately 400,000 people in the Planalto region, comprising the provinces of Benguela, Bie, and Huambo. ICRC also distributed food, seeds, tools, and blankets in southeastern Angola.

UNICEF - managed the largest U.N. relief operation in MPLA-controlled Angola, with programs in food security, supplementary feeding, health services, water supply and nutritional surveillance.

UNDP/UNDRO - provided \$110,000 for local emergency food purchases.

WFP - provided \$3,000,000 in food assistance, and delivered 22,000 MT of food aid.

Governments

Pledges are in response to the U.N. Secretary General's May Appeal.

Canada - donated \$2,200,000 in food aid, \$3,300,000 to WFP, and \$5.8 million to Canadian NGOs.

Denmark - pledged \$392,400 through DanChurchAid.

Germany, Dem. Rep. - pledged 100 MT of food aid, valued at \$270,000.

Germany, Fed. Rep. - pledged \$227,500 to Caritas Angola.

Nigeria - pledged relief items, valued at \$250,000.

Norway - pledged \$68,700 to Caritas Angola.

Spain - pledged 1000 MT of wheat, valued at \$160,000.

Sweden - supplied drug kits to health clinics in Namibe, Huila, and Benguela and pledged \$1,124,600 to support airlifts and U.N. operations and \$145,200 to Caritas Angola.

United Kingdom - provided \$845,308 in emergency assistance.

Non-Governmental Organizations

Canadian Council of International Cooperation
(Canadian NGO consortium) - pledged \$6,550,000 in
food and transportation costs and delivered 4,000 MT
of food to Huila Province.

CARE Canada - delivered food from Zimbabwe via
the Caprivi Strip into Cunene and provided technical
support to the GPRA.

German Agro-Action - distributed 3,000 MT of corn
and assisted drought victims in Cuanza Sul, Huila,
Namibe, and Cunene Provinces.

MSF/France - has had medical personnel working in
UNITA-controlled territory.

Tear Fund/UK - pledged \$49,300 in food.

| | |
|--------------|---------------------|
| TOTAL | \$25,566,768 |
|--------------|---------------------|

ETHIOPIA - Drought

Date: 1989-1990

Location: Northern Ethiopia, principally Eritrea and Tigray

No. Dead: None reported

No. Affected: Initial estimates ranged as high as 5 million, final estimates suggest that 2.3-3.8 million people were at risk

Total USG Assistance: \$171,385,673

The Disaster

Over two decades of civil war between the government of Ethiopia and insurgent groups in Eritrea and, more recently, in Tigray had devastated Ethiopia by 1990. Fighting – or the threat of conscription – had driven farmers off their land or made working on the land impossible. In 1989 and 1990, both drought and intensified fighting led to a severe food shortage in northern Ethiopia, especially in Eritrea, Tigray and Wollo. The fighting in Eritrea and Tigray had also eliminated some of the options for farmers seeking to supplement their incomes by migrating for wage labor. In February 1990, relief efforts were dealt a major blow when Eritrean insurgents captured the port of Massawa, cutting off the major relief route for supplies going into Eritrea and northern Tigray. Diplomatic efforts by both the United States and the Soviet Union failed to convince the Ethiopian government and the Eritrean People's Liberation Front (EPLF – the principal insurgent group in Eritrea) to produce a workable agreement to reopen the port. In early 1990, the insurgents and the Ethiopian government agreed to an alternative relief route going north from Dese, but it made delivery of relief more difficult than it would have been through the port.

In late November 1989, international observers estimated that up to 5 million people would be at risk of starvation in northern Ethiopia. The Ethiopian Government itself estimated that 3.4 million people would need assistance outside the war zones. As more information became available about the extent of the famine, estimates of those at risk changed to 2.3-3.8 million. Despite the gravity of the situation,

there were no deaths reported due to the drought, and most people stayed in their villages and towns, avoiding the formation of feeding camps. Over 470,000 MT of relief food were delivered to Ethiopia between January and December 1990. The total cost of the relief effort, including both food and non-food relief, was more than \$365 million for FY 1990.

Situation by Region

Poor rains during both the spring planting season ("belg") and the main season ("meher") in the summer of 1989 decimated the 1989-1990 harvest in Eritrea and Tigray. By the end of the summer, it became apparent that the regions of Eritrea, Tigray, Wollo, and Harerge would need emergency food assistance.

Agricultural production in Eritrea is dependent on a single rainy season that runs from July to September, with heavy rains falling only in July and August. In 1989, Eritrea received only 25% of its average rainfall in July, and only 58% of its normal rainfall in August. Total crop production in Eritrea for the 1989 - 1990 harvest was 60,000 MT, only 27% of a good year's harvest. (It should be noted that Eritrea suffers from chronic drought, and that the region is not self-sufficient in food production. As a result, the Eritreans have developed methods for coping with food shortages. However, because of the fierce fighting in Eritrea, many of the traditional methods, such as migration to urban centers for wage labor, could not be implemented.) Initial figures for at-risk populations in Eritrea ran as high as 3 million. Later estimates suggested that less than half that number actually needed emergency relief. For relief purposes, Eritrea – unlike Tigray, which was completely controlled by the insurgents in 1990 – had to be treated as two distinct regions: one under EPLF jurisdiction and one under the control of the Government of the People's Democratic Republic of Ethiopia (GPDRE).

In Tigray the situation was somewhat better. A wide discrepancy in agricultural conditions throughout the region resulted in some districts producing surpluses while others had nearly total crop loss. Production for the whole region was 190,000 MT or approximately 63% of a good year's harvest. Both through commercial markets and through the efforts of the

Relief Society of Tigray (REST - the relief arm of the Tigrayan liberation movement) grain from surplus areas was distributed in districts where crop failure was widespread. Early estimates of up to 1.4 million needing assistance in Tigray fell to approximately one million by mid-1990.

Concerns that **Wollo** province would experience a massive food shortage proved to be exaggerated. Early estimates of up to 1.4 million people at risk dropped to 200,000 by mid-1990. Wollo's harvest produced 75% of a good year's crop. Most of the losses in Wollo are attributable to the disruptions caused by fighting between the Tigrayan People's Liberation Front (TPLF) and the GPDRE, rather than to agroclimatic conditions.

Harerge proved difficult to assess. Small pockets in the lowland areas appear to have had a very bad year following one or two previous drought years. The highland areas produced an average harvest. The Relief and Rehabilitation Commission (RRC) of the GPDRE estimated that 568,740 people would need emergency food. International donors thought this number was too high, and consequently sent only small amounts of food to Harerge. There were reports of some deaths due to the famine late in the summer of 1990.

Relief Efforts

By the end of the summer of 1989, famine monitors in Ethiopia were warning the international donor community that a food crisis was developing in Ethiopia. In late October, the Ethiopian Government issued an initial appeal to the international community for 330,000 MT of food for the 1.85 million people it estimated to be at risk. This early signal on the part of the government enabled the international community to mobilize quickly. International donors began to make pledges for food assistance in November. Since many of the people most at risk lived in areas under EPLF or TPLF control, one of the first issues the donors faced was the problem of delivering food across the battle lines. Through diplomatic channels, the international community urged the Ethiopian Government and the rebels to permit free passage of relief supplies to those living in insurgent territory. After several weeks of negotiation, in late December 1989 the GPDRE announced that it

had authorized the RRC to work with the Joint Relief Partnership (JRP - a consortium of Ethiopian NGOs) to develop a plan for delivering relief food to rebel-held Tigray from the northern Ethiopian port of Massawa. The JRP and the RRC signed an agreement permitting the JRP to run a limited relief program in Tigray shortly afterwards.

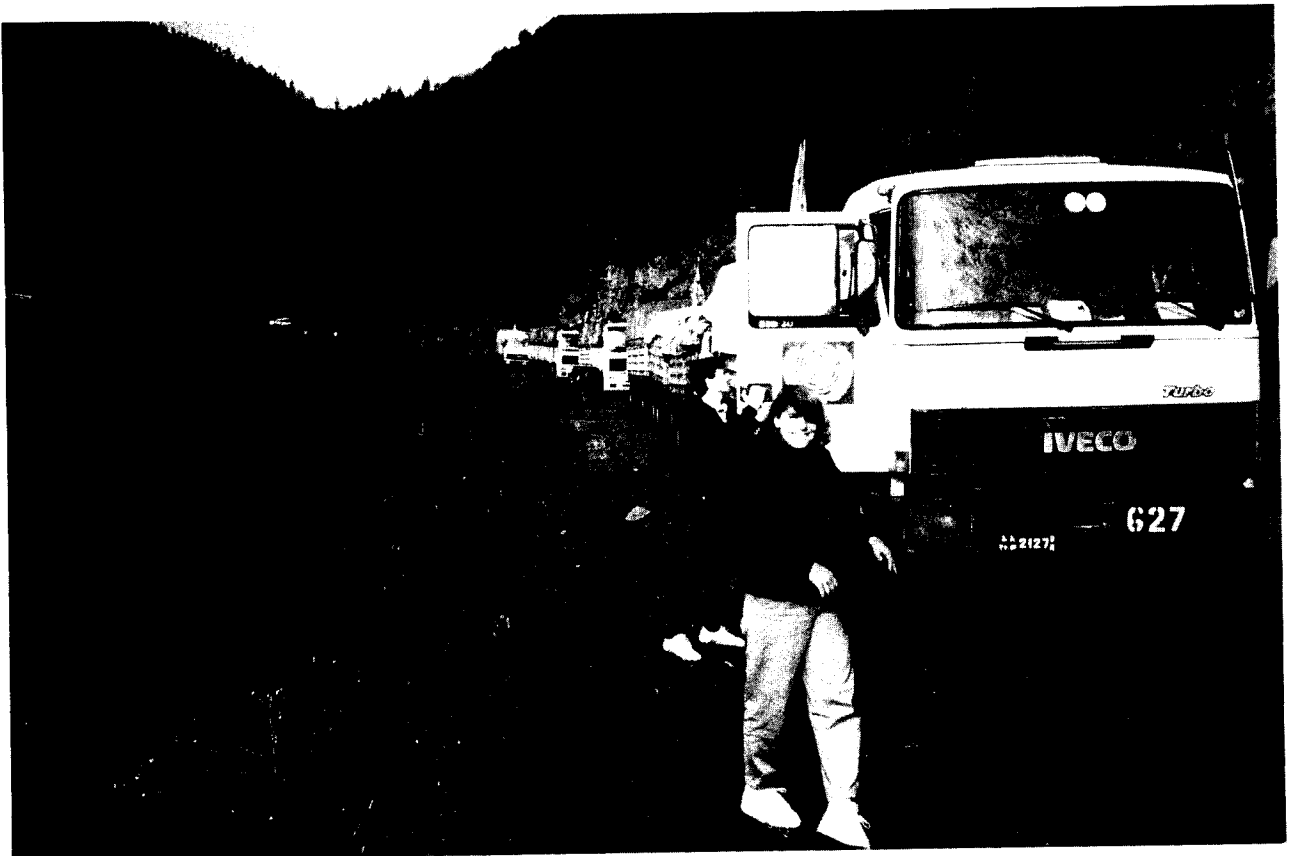
Before the plan could be fully implemented, heavy fighting broke out in Eritrea, Tigray and Wollo. In mid-February, the EPLF took the port of Massawa, leaving the GPDRE in control of Asmara, the capital of Eritrea, and a few other towns. The capture of Massawa completely cut off the flow of relief supplies through Massawa into Eritrea and northern Tigray. Up to 40,000 MT of relief food did pass through Massawa before the attack. However, approximately 40,000 MT of relief supplies were believed to be in the port at the time of the attack, of which 18,000-20,000 MT were probably destroyed. The remainder may have been seized and distributed by the EPLF after the attack.

The changed circumstances disrupted the agreement between the TPLF and the GPDRE. The EPLF capture of the port meant that the plan to have relief food for Tigray enter the country through Massawa would no longer work. However, in mid-March, the RRC and the TPLF agreed to let JRP relief convoys take food from Dese, in southern Wollo, to northern Wollo and Tigray along the "southern line." On March 21, the first convoy, consisting of eleven trucks carrying 120 MT of food arrived in Kobo, a city in northern Wollo. This southern route was more difficult than a corridor from Massawa would have been: the distances were much longer, the roads were not as good, and frequent skirmishes in the area of the route made safe passage more difficult to arrange. A number of improvements were made to the road during the spring, including the installation of two prefabricated bridges, which enabled the trucks to move food more quickly. Although skirmishes between the Government and the TPLF continued throughout the year, both sides kept the fighting away from the relief line. Periodic disagreement between the JRP and the World Trucking Organization in Ethiopia (WTOE - the U.N. organization which provided trucks for the southern route) and the JRP and REST were resolved without major disruption of the supply line. Despite all the difficulties, relief

convoys carried 104,000 MT along the southern line to northern Wollo and Tigray from March through December 1990. By September 1990, The JRP, which supervised the distribution of the relief supplies, reported that the food was reaching 236,000 beneficiaries in northern Wollo, and 723,000 in Tigray. Not all of those at risk could be reached by the supplies coming up the southern route. REST distributed another 133,000 MT of relief food in Tigray. This food was a combination of imported food and surplus crops from areas with ample harvests within Tigray. Very little information is available about REST's food distribution.

Shortly after the EPLF took Massawa, the Ethiopian government proposed an airlift to Asmara, since the city was cut off from resupply on the ground. Asmara faced increasingly harsh conditions, as shortages of fuel, electricity, food and water began to affect the

population. Although there were reports that some food leaked into Asmara across the battle lines, exorbitant prices put the food that was available out of the reach of much of the population. In addition, people fleeing the fighting as well as soldiers' families added to the numbers already in the city. Relief workers began to express increasing concern over the nutritional status of vulnerable parts of the population, especially children and elderly people, during the summer. In June 1990, the WFP began transporting cargo to Asmara on Ethiopian airlines planes using emergency transport funds left over from 1988. WFP issued an appeal for support from donors for a two-month airlift. At the beginning of August, WFP had raised enough money to charter two Trans Afrique planes for the airlift. Increasingly worried about the severe shortage of food in Asmara, the U.N. Secretary General made another appeal for funding to extend the airlift and to add another



WTOE trucks move along the "southern line" into rebel-controlled Tigray
Photo courtesy by Michael Harvey, AID/OFDA

airplane. After the Iraqi invasion of Kuwait, fuel became harder to find and more expensive. EPLF shelling of the Asmara airport forced the planes to stop flying for short periods of time on several occasions. The WFP airlift continued to run two planes between Asmara and Assab until the end of FY 1990, carrying over 26,000 MT of relief supplies including food, shelter materials, fuel, medical supplies, and feeding equipment. WFP reported that it had spent \$7 million on the airlift over and above the funds left over from the 1988 funds by early October 1990. A number of other smaller airlifts also brought relief supplies into Asmara:

| Organization | Total carried (MT) |
|--|--------------------|
| Christian Relief and Development Agency (CRDA) | 1,042 |
| Joint Relief Partnership | 390 |
| UNICEF | 410 |

The food brought in by the airlifts was only distributed in government held areas in and around Asmara. It is estimated that approximately 1 million people were receiving emergency food in government controlled areas by the end of FY 1990. Over 119,000 MT of relief food was distributed by the Eritrean Relief Association (ERA – the relief arm of the Eritrean liberation movement) to needy people living in areas controlled by the EPLF. Very little information is available about ERA's food distribution.

(The main rains in summer 1990 fell far short of the amount required for a good crop in Ethiopia. By the end of the summer, famine monitors were warning that Eritrea, parts of Tigray, and areas in southeastern Ethiopia would need emergency assistance during 1991. Over 4 million people were estimated to be at risk. Readers should refer to Ethiopia situation reports, issued monthly by OFDA, or the FY 1991 Annual Report for more information.)

Action Taken by the Government of the People's Democratic Republic of Ethiopia (GPDRE) and Non-Governmental Organizations

The Ethiopian Government's early acknowledgement of the impending famine in northern Ethiopia, and its willingness to negotiate safe passage routes with the insurgents contributed greatly to the success of the

1989–1990 famine relief effort. The GPDRE's early involvement enabled the donors to work closely with the RRC to conduct assessments of need and monitor the situation as it developed. The Government's initial estimate of 1.85 million people at risk did not include people in insurgent areas. Later the GPDRE issued revised estimates of 1.75 million people in insurgent controlled Eritrea and 800,000 people in insurgent controlled Tigray needing emergency food. The later estimates came much closer to other assessments of the scale of the need.

A crucial aspect of the relief effort was the agreement to insure that relief convoys moving through Wollo and Tigray would not become targets for either side. The government and the TPLF haggled over the details of an operating agreement for the JRP for several months. Once the agreement was signed, both sides honored their commitments to keep away from the "southern line." The GPDRE also permitted fuel tankers to accompany the convoys so that refueling along the long route was no longer an issue. In contrast with previous famines, reports of diversion of relief food for political purposes were minimal this year. One relief official indicated that he saw the RRC distributing relief grain to Ethiopian militia, but this was the only such incident reported on either the government or the insurgent side. Both ERA and REST played a major role in the distribution of relief food. Some of the convoys supervised by ERA and REST were bombed by GPDRE airplanes, but most made it through without any damage. Since neither group would allow comprehensive outside monitoring of the distribution, it is difficult to assess the integrity of the process.

In the months following the EPLF capture of Massawa, the Ethiopian Government made several unsuccessful attempts to recover the city, and bombed the port repeatedly, raising fears that the port would not be useable without major renovations. Intensive diplomatic efforts throughout the spring resulted in a joint U.S.-USSR. announcement in June that the Ethiopian Government had agreed to stop bombing the port and to allow relief food to enter the port under a U.N. sponsored plan. For the next six months, international donors went back and forth between the two sides, as each in turn declared that it was willing to open the port if certain conditions

could be satisfied. Despite numerous occasions on which the EPLF and the government appeared close to resolution of outstanding issues, there was no agreement in FY 1990. Massawa remained closed through the end of the year.

Assistance Provided by the U.S. Government

The U.S. Government began to monitor the situation in Ethiopia in early 1989. A.I.D.'s Famine Early Warning System (FEWS) started tracking the first rains in the spring and continued to follow the progress of the rains and crop patterns through the end of the year. The USAID Mission kept a close watch on the rains, and on Oct. 14, 1989, U.S. Charge d'Affaires Robert G. Houdek declared a disaster due to conditions of severe drought which could lead to famine in northern Ethiopia. The U.S. Government provided over half of the relief food delivered to northern Ethiopia during FY 1990. Throughout the year, the USG played a major role in both the diplomatic and logistical aspects of the relief effort.

The USG maintained a consistent policy of working with all the parties involved in the relief effort to ensure that food reached those in need in both government and insurgent territory. U.S. relief agencies cooperated with other donors to maintain a steady supply of relief in the pipeline to avoid breaks in food distribution. After the EPLF had taken Massawa, the USG, along with other donors, pressed both the EPLF and the GPDRE to reopen the port to relief deliveries. In April, the United States, the EC, Canada, Norway, Switzerland, and Sweden issued a joint statement calling on all parties to facilitate relief, including opening all ports in Ethiopia. The Soviet Union later endorsed the statement. In June, the United States and the Soviet Union were able to obtain a commitment from the GPDRE to stop bombing the port and to permit Massawa to be used for relief purposes. Unfortunately, that agreement did not lead to a settlement between the GPDRE and the EPLF over the port. The USG and the Soviet Union also agreed to start a joint airlift to Massawa using Soviet planes and American food, but this plan was never implemented due to EPLF opposition.

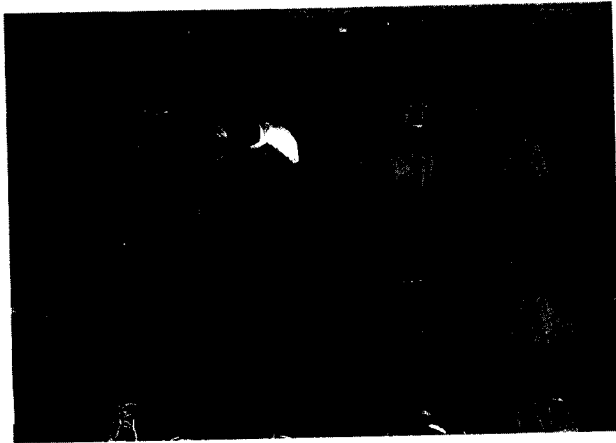
OFDA Assistance

OFDA supported the relief program in a variety of ways. Realizing that more staff would be needed to assist in the relief effort, OFDA paid for six contractors to work on relief issues both in the Mission in Addis and elsewhere. OFDA funded two additional contractors to assess trucking capacity and needs in northern Ethiopia, with regard to transportation of emergency food. Because the need for trucks and spare parts was so great, OFDA made grants to CRS for food distribution trucks and spare parts, and to Lutheran World Relief for spare parts for transport trucks in use on the emergency food supply routes. OFDA also paid to move five water tanker trucks that it had purchased in FY 1989 for Somalia relief efforts from Somalia to Ethiopia (see "Somalia Civil Strife," *OFDA Annual Report, FY 1989*). OFDA also funded purchases of food in surplus areas in Ethiopia for distribution in northern Ethiopia through various NGOs. In response to a special request, OFDA provided 30,000 blankets and 375 rolls of plastic sheeting from its stockpile to the Christian Relief Development Agency (CRDA) for use at a camp for displaced people in northern Ethiopia. The drought and the fighting in Eritrea led to a deterioration in health conditions. OFDA provided funds to Action Internationale Contre La Faim (AICF) to do nutritional assessments and provide medical care at two clinics in Eritrea (one was subsequently moved due to fighting in the area). In addition, OFDA made two grants to WFP to support the airlift into Asmara. OFDA also paid for staffing for the office of the Special Representative of the U.N. Secretary General in Ethiopia through the U.N. Emergency Preparedness and Planning Group.

Through a Congressional earmark, OFDA also made three grants to Ethiopian organizations for support of children who had been displaced and/or orphaned by war and famine in Ethiopia.

FFP Assistance

U.S. Government food assistance provided through FFP accounted for over 51% of all the food aid reaching northern Ethiopia in 1989-1990. The first shipments were authorized in October and began arriving in Ethiopia in January 1990. U.S. food was allocated as follows:



Ethiopian school girls on morning break at orphanage in Addis Ababa partially funded by OFDA
 Photo by Franca Brilliant, OFDA/LAI

158,691 MT to LWR for relief in Eritrea and Tigray

64,734 MT to Joint Relief Partnership through CRS for the southern line from Assab to Eritrea and Tigray, and a small amount for relief in Harerge

11,261 MT to CARE, approximately half went to victims of drought and war in Northern Shoa, and half went to Harerge

3,800 MT to LRCS for emergency programs throughout Ethiopia

1,462 MT to FHI for emergency relief in southern Shoa and eastern Gondar

300 MT to American Joint Distribution Committee for the feeding of newly displaced people in Addis Ababa

2,499 MT for the UN-sponsored Assab-Asmara airlift

38,343 MT for refugee feeding in western and eastern Ethiopia

TOTAL TONNAGE: 281,090 MT

The total value of FFP's emergency food assistance, including both commodities and transport, was \$159,514,900.

RP Assistance

RP provided the ICRC with \$2 million in FY 1990 for surgical teams in Bahir Dar, Dese and Asmara. The teams set up emergency clinics whose primary targets were civilians and soldiers wounded as a result of the fighting.

Summary of USG Assistance

OFDA Assistance

Grants to WFP for airlift to Asmara\$2,500,000

Grant to AICF for an emergency nutrition and health program in Eritrea \$103,550

Grant to LWR for spare parts to transport relief supplies in northern Ethiopia\$1,029,000

Grant to CRS for emergency food distribution in northern Ethiopia and for transport of 5 water/fuel tanker trucks..... \$700,705

Grant to UNDP for the Emergency Prevention and Preparedness Group (EPPG) \$160,000

Funding for six contractors to support relief operations \$210,742

Funding for two contractors to assess trucking and transport of relief food in northern Ethiopia\$27,230

Grant to Redd Barna for food purchases for northern Ethiopia..... \$4,000,000

Grant to CRS for purchase of six trucks and spare parts for the Ethiopian Catholic Secretariat and the Joint Relief Partnership, to be used for emergency food distribution..... \$527,538

Provision and transport for 30,000 blankets and 375 rolls of plastic sheeting to CRDA for use in displaced persons camps in northern Ethiopia \$288,755

Funding for a contractor to support the USAID Mission's relief efforts in Addis Ababa for two months, starting Jan. 19\$19,299

Umbrella grant for CRDA for relief supplies
under orphan earmark \$150,000

Grant for construction of toilet and shower
facilities and for family reunification consultant
under orphan earmark \$87,712

Funding for emergency tented camp under
orphan earmark \$66,242

Total OFDA \$9,870,773
Total FFP \$159,514,900
Total RP \$2,000,000

TOTAL \$171,385,673

Assistance Provided by U.S. Voluntary Agencies

Baptist World Relief - provided hunger relief,
agricultural projects and support for health care
clinics in Tigray and Gondar provinces. Total value of
projects was \$26,748.

CARE - spent \$11,282,800 on transport and delivery
of food and water.

CRS - bought ten trucks costing a total of \$800,000 for
delivery of relief food along the southern route and
\$41,000 worth of truck tires. CRS purchased spare
parts worth \$138,000 for 6 trucks funded by OFDA.
CRS also sent medicine to Asmara at a cost of
\$180,000.

FHI - sent an estimated \$2,200,000 worth of grains
and an additional \$722,965 in cash.

Grassroots International - gave \$15,000 to ERA
mainly for a water supply project.

LWR - spent \$537,500 on agricultural rehabilitation
through indigenous organizations.

MAP International - sent medicine and vaccines
worth \$7,100.

Oxfam - provided grinding mills in Tigray costing
\$75,000, agricultural assistance (oxen, seeds, tools) in
Eritrea valued at \$70,000, and a grant for milk powder
in Eritrea valued at \$71,000, as well as development
assistance.

TOTAL

\$16,167,113



**Ethiopian children in vocational class at Enterprises
Children's Home, a center for orphans and community
children partially funded by OFDA**

Photo by Franca Brilliant, OFDA/LAI

Assistance Provided by the International Community

International Organizations

EC - The total EC contribution from November 1989 through October 1990 was \$107,890,000. According to WFP records, 212,436 MT of EC food was delivered to Ethiopia in 1990.

FAO - committed \$170,000 for a technical cooperation project.

LRCS - issued an appeal for the emergency in Ethiopia.

WFP - pledged 27,000 MT of wheat scheduled to arrive in November and December 1990.

Governments

Australia - pledged \$5,000,000 to buy 8,000 MT of wheat, 1,500 MT of flour, 55 MT of high protein biscuits, medical supplies and other food purchases for northern Ethiopia.

Belgium - pledged \$321,500 for the U.N. airlift.

Canada - pledged \$20,558,700 for relief costs.

Denmark - committed \$900,000 to the Danish Red Cross for purchase and transport of food for northern Ethiopia. The grant was administered by LRCS. Denmark also made a grant of \$2,100,000 to two Danish NGOs. Half of the grant was channeled through the Danish church's emergency agency for purchase of medical supplies, food, tents, and clothes. The other half was channeled through a Danish NGO for the purchase, renovation, and shipment of trucks to be used to transport emergency supplies.

Finland - pledged \$1,035,000 to purchase food through LRCS and \$325,000 for the U.N. airlift.

France - pledged \$973,500 for the U.N. airlift.

Germany, Fed. Rep. - pledged 5,000 MT of wheat, and an additional 5,000 MT of sorghum. West Germany also pledged \$2,077,000 for the U.N. airlift to Asmara.

Italy - pledged \$518,000 for the U.N. airlift.

The Netherlands - pledged \$10,600,000 for emergency aid to northern Ethiopia, to be split between Dutch PVOs, UNICEF, the International Red Cross, and WFP. The Netherlands also pledged \$1,095,100 for the U.N. airlift to Asmara.

Sweden - In addition to its commitment for development funds, the Government of Sweden pledged a total of \$6,450,000 in emergency relief funds for the Swedish Red Cross, UNDP, WFP and UNICEF for FY 1990/1991.

Switzerland - pledged \$142,000 for the U.N. airlift to Asmara.

United Kingdom - pledged 16,300 MT of cereals, 10,000 MT of wheat flour, and other emergency aid, all worth \$17,900,000, in 1990, as well as an additional 10,000 MT of emergency food. The U.K. also pledged \$572,250 for the U.N. airlift to Asmara.

Non-Governmental Organizations

Caritas - pledged 4,200 MT of wheat.

During 1990, Red Cross and Red Crescent national societies pledged as follows to the LRCS appeal:

Australia Red Cross - \$6,596
Austria Red Cross - \$37,650
Great Britain Red Cross - \$179,591
Canada Red Cross - \$7,172
Denmark Red Cross - \$334,332
Finland Red Cross - \$374,994
Japan Red Cross - \$69,088
Netherlands Red Cross - \$29,536

TOTAL **\$179,667,009**

MOZAMBIQUE - Civil Strife

Date: 1989-1990

Location: Nationwide

No. Dead: Since 1981, an estimated 900,000 civilian deaths directly or indirectly caused by the war, according to the U.N. Economic Commission for Africa

No. Affected: 4,500,000, including 2,000,000 internally displaced and returnees, and approximately 1,500,000 refugees in neighboring countries

Total USG Assistance: \$46,262,149

The Disaster

Approximately fifteen years of constant civil strife, nationwide food shortages, and economic stagnation have taken their toll on the nation of Mozambique. In 1990, after years of being unsuccessful at defeating the renegade guerrillas trying to destabilize the country, the government of Mozambique agreed to hold peace talks with their arch-enemy, RENAMO. The decision to hold these talks was based on several factors. Despite joint military campaigns with Zimbabwean forces and diplomatic efforts to cut off external support for the discredited RENAMO movement, the government had been unsuccessful at stopping hit-and-run attacks on civilians and infrastructure by elusive guerrilla units. Furthermore, over the last several years the government had embarked on a series of political and economic reforms which culminated in the renunciation of one party Marxist-Leninist rule and a commitment to multi-party democracy and free enterprise. Finally, both the civilian population and international community had become weary of the permanent emergency situation and put pressure on the government to seek a resolution to the conflict.

While peace talks were taking place in Malawi, Kenya, and Italy, the plight of the Mozambican people continued. Random guerrilla attacks on villages and relief convoys continued in all ten provinces. Over 2 million Mozambicans were listed as internally displaced, including approximately 150,000 returnees. An additional 2.5 million Mozambicans

living in rural areas were unable to grow enough food because of chronic drought and frequent RENAMO attacks. Not included in the estimates of the Mozambican affected population were urban dwellers affected by food shortages and the more than 1 million Mozambicans who had sought refuge from the civil war in neighboring countries. As the possibility for a nationwide ceasefire grew, relief agencies began planning for an anticipated influx of Mozambican returnees from other countries.

As more and more returnees began trickling across the borders and more rural areas became accessible, the number of people requiring emergency assistance grew. The condition of villagers living in areas once controlled by RENAMO was by far the most desperate. Most of these villagers had been mistreated by their RENAMO captors, and were found to be sick and starving when government forces and relief agencies finally got access to them. In the district capital of Morruea in Zambezia Province, between 30 and 50 persons were dying each day from starvation or disease. Outbreaks of measles in overcrowded *deslocado* camps claimed the lives of thousands of malnourished children. Thousands of *deslocados* arrived at Marrumeu in Sofala Province in dire need of food, most wearing empty sacks or tree bark. Many villages were still inaccessible because of the threat of guerrilla ambush. Most observers expressed skepticism that RENAMO would be able to guarantee a ceasefire among all of the guerrilla units and bandits throughout the country.

Action Taken By the Government of the Republic of Mozambique (GRM) and Non-Governmental Organizations

The duration of the emergency situation was also taking its toll on the GRM's relief infrastructure. The Department for the Prevention and Control of Natural Calamities (DPCCN) continued to transport most of the donated food and relief supplies to the district level. However, a shortage of trucks due to bandit attacks and inadequate donor pledges caused a serious hindrance to the delivery of relief supplies to the most seriously affected areas. Private truckers were contracted by the DPCCN and NGOs to transport food. Food was also transported by railroad and by barge to coastal areas. As a last resort, relief supplies



Deslocados who had escaped from rebel attack
Photos by Joseph Gettier, AID/OFDA

were airlifted to affected areas in 15 districts which were otherwise inaccessible.

Another indication of the duration of the emergency situation were the reports for the first time that food aid was being diverted and stolen. The GRM set up a commission of inquiry to investigate reported cases of theft and diversion of food aid commodities. The DPCCN also implemented tighter monitoring and accountability measures in an effort to insure that food commodities were delivered to their intended beneficiaries.

Two domestic non-governmental organizations were also involved in relief operations. The Christian Council of Mozambique (CCM) sponsored several airlifts and distributed food, clothes, blankets, seeds, and handtools to needy Mozambicans. The

Mozambican Red Cross Society worked in collaboration with the ICRC and LRCS on a number of emergency assistance and rehabilitation programs.

Assistance Provided by the U.S. Government

For the seventh straight year, the USG provided humanitarian assistance to Mozambique. In FY 1990, OFDA transferred funding of several of the U.S. PVO relief and rehabilitation projects over to A.I.D.'s Development Fund for Africa account. OFDA had originally funded projects managed by CARE, WVRD, Africare, SCE, FHI, and ADRA, but by FY 1990 these projects had become less emergency oriented and more involved in providing rehabilitation assistance to Mozambique. A PVO Support Project was developed by A.I.D.'s Bureau for Africa and funded at a level of approximately \$6 million in FY 1990.

OFDA continued to provide emergency relief assistance to the victims of civil strife in Mozambique. On Oct. 27, 1989, U.S. Ambassador Melissa Wells redeclared a disaster situation in Mozambique for the seventh year in a row. In FY 1989, OFDA began funding airlifts of food, seeds and relief supplies into the district of Gile in Zambezia Province. These airlifts, conducted by WVRD and Air Serv, saved the lives of thousands of *deslocados* who had escaped from RENAMO and congregated in the villages of Gile and Mugalama. The success of this program led OFDA to provide a grant to WVRD to airlift food and supplies into isolated areas as soon as pockets of famine were identified. In October 1990, DPCCN relief personnel and WVRD staff visited the recently liberated town of Morrua in Zambezia Province and identified 51,000 people in dire need of assistance and as many as 30 to 50 persons dying each day. The WVRD Emergency Airlift Grant enabled WVRD to quickly perform nutritional and agricultural assessments and charter the Mozambican national airline to deliver food and agpaks into the otherwise inaccessible area. By November, WVRD had airlifted 242 MT of food and supplies into Morrua and the death rate had been significantly reduced.

Inaccessibility continued to be a constraint throughout Mozambique. In FY 1990, OFDA renewed its grant with the U.S. PVO, Air Serv, to provide airplane

passenger service to USAID personnel to enable them to inspect relief projects and conduct assessments. An OFDA team used an Air Serv plane during their visit to Mozambique in April. OFDA also purchased a Cessna Caravan for Air Serv to be used for small relief commodity airlifts into isolated areas. The plane arrived in May, but had to be pulled out in late September to replace another Air Serv plane in Sudan.

In response to a GRM emergency appeal for agricultural inputs, USAID/Maputo requested that OFDA provide funds to purchase sorghum, butterbean and cowpea seed in time for the planting season. OFDA sent USAID/Maputo a mission allotment for \$500,000 to fund the procurement. The seeds were purchased and distributed to displaced farmers in the four southern provinces in time for planting.

The major portion of the U.S. Government's assistance to Mozambique was in the form of food aid. The USG continued to be the largest food aid donor to Mozambique. In FY 1990, A.I.D.'s Office of Food for Peace provided 93,791 MT as part of its regular Title II program, 53,104 MT in emergency Title II commodities, and 5,530 MT in Section 416 food commodities. As in previous years, approximately one third of this food was distributed by the DPCCN or U.S. PVOs to affected and displaced persons in rural areas. The other two-thirds was sold by the Ministry of Commerce to affected urban dwellers. This program was designed to prevent urban Mozambicans from becoming dependent on free food distribution. The substantial local currency proceeds from these sales were used to finance various government and U.S. PVO relief and rehabilitation activities.

Summary of USG Assistance

OFDA Assistance

| | |
|--|-----------|
| Grant to Air Serv to purchase Cessna Caravan | \$950,000 |
| Grant to Air Serv to provide air service | \$394,460 |
| Grant to WVRD for Emergency Airlifts | \$484,000 |
| Mission Allotment for seed procurement | \$500,000 |



This malnourished child was one of the thousands of victims of civil strife in Mozambique

USAID Assistance (DFA Account)

| | |
|--|-------------|
| WVRD Agriculture/Child Survival | \$2,000,000 |
| CARE Logistical Support Unit | \$1,000,000 |
| SCF/US Gaza Agricultural Recovery | \$1,100,000 |
| FHI Sofala Agricultural Recovery | \$932,789 |
| ADRA Inhambane Agricultural Recovery | \$500,000 |
| Africare Sofala Agriculture/Water | \$200,000 |

FFP Assistance

| | |
|--|--------------|
| 93,791 MT Title II regular program | \$12,863,200 |
| Transport costs of 93,791 MT | \$8,025,900 |
| 53,104 MT Title II emergency program | \$9,544,400 |
| Transport costs of 53,104 MT | \$6,962,400 |

| | |
|-----------------------------------|---------------------|
| 5,530 MT Section 416 | \$492,200 |
| Transport costs of 5,530 MT | \$312,800 |
| Total OFDA | \$2,328,460 |
| Total AFR | \$5,732,789 |
| Total FFP | \$38,200,900 |

| | |
|--------------|---------------------|
| TOTAL | \$46,262,149 |
|--------------|---------------------|

Assistance Provided by U.S. Voluntary Agencies

ADRA - managed an agricultural recovery and child survival program in northern Inhambane Province.

Africare - managed two projects in Sofala Province: one that distributed agricultural inputs to displaced farmers and the other that provided technical assistance in constructing shallow wells in Dondo district.

Air Serv International - provided crew and twin engine aircraft for use by relief personnel to inspect relief programs in remote areas.

CARE - continued to manage the Logistical Support Unit of the DPCCN, overseeing the receipt, storage, transportation, distribution and monitoring of most of the internationally donated relief commodities, including food.

CRS - supported various Caritas projects throughout the country.

CWS - supported the Christian Council of Mozambique's program to transport and distribute seeds, food, clothing and utensils to affected populations.

FHI - distributed seeds, clothing and medicines to displaced Mozambicans in Sofala Province.

Oxfam America - installed shallow wells and irrigation equipment in Tete Province.

SCF/US - managed an agricultural recovery and child survival in Gaza Province and the traumatized children and family reunification program.

WVRD - directed the emergency airlift of food and supplies in Zambezia Province. WVRD also ran a commodity management program in Zambezia, an ag-pak distribution project in Tete and Zambezia, and a primary health care/child survival program in Tete.

Assistance Provided by the International Community

On April 25-26, governments and non-governmental organizations pledged more than \$130,000,000 in food and other assistance at the Mozambique Emergency Donors' Conference held in New York. The following list of international assistance is taken from "Response to Mozambique Emergency Appeal 1990-91" dated January 1, 1991.

International Organizations

EC - donated \$13,869,144 in food aid and vital medicines and emergency medical supplies.

ICRC - provided emergency assistance to civilians affected and isolated by the conflict.

UNDP - provided institutional support to CENE.

UNDRO - supported emergency stockpiles in Maputo and Beira.

UNHCR - coordinated a program to resettle Mozambican returnees.

UNICEF - managed various health, agriculture, water, and vital medicines projects throughout Mozambique.

WFP - provided \$15,369,927 in food aid and logistical support.

Governments

Australia - donated \$836,430 in food aid.

Austria - gave \$405,000 in food aid.

Canada - provided food aid and grants to COCAMO, CARE, UNICEF and UNHCR, for a total contribution of \$1,911,928.

Denmark - contributed \$668,142 for returnees.



Children in a feeding center in Mugalama receive food delivered to their village by the WVRD emergency airlift funded by OFDA

Finland - gave \$1,610,572 in food aid and grants to UNICEF

Germany - gave \$3,059,618 in food aid and grants to German Agro-Action and UNICEF

Italy - provided \$7,780,000 in logistical support to the DPCCN.

Japan - contributed \$944,518 in food aid.

Korea, Rep. - donated \$30,000.

Liechtenstein - donated \$14,184 for returnee programs.

Netherlands - donated \$3,891,726 in food aid, logistical support and grant to UNHCR.

Norway - provided \$6,451,954 in grants to WFP and Redd Barna for logistical support and seeds and tools.

Sweden - provided \$25,722,133 for logistical support, trucks, medicines, seeds, handtools, clothing, blankets, and food.

Switzerland - donated \$7,649,100 in food aid and grants to UNDP, UNDRO, and Handicap International.

SCF/UK - managed relief and rehabilitation projects mainly in Zambezia.

TOTAL

\$103,241,135

United Kingdom - provided \$10,264,916 in food aid and grants to CARE, Action Aid, Caritas, HelpAge, SCF/UK, and CONCERN.

Non-Governmental Organizations

ActionAid - managed relief and rehabilitation projects in Zambezia Province and contributed \$210,600.

Bioforce - distributed seeds to displaced farmers in Inhambane province.

Caritas - donated \$9,000 in food aid to the Appeal.

COCAMO (Canadian NGO Consortium) - provided assistance in Nampula Province.

Eduardo Mondlane Foundation - supported the construction of wells, schools and health clinics in eight provinces.

German Agro-Action - distributed seeds, tools, clothing, and blankets, valued at \$171,000 in Sofala and Manica Provinces.

Handicap International - operated a physiotherapy and orthopedic center for amputees.

HelpAge - managed health and water projects in Maputo Province.

MSF/Belgium - operated a health project in Inhambane, Maputo, and Tete provinces.

MSF/France - managed a health project in Manica and Zambezia.

MSF/Netherlands - managed a medical technical assistance project in Nampula.

Oxfam/UK - operated relief programs in Niassa, Cabo Delgado and Zambezia provinces. The total contribution was valued at \$2,371,243.

Redd Barna - engaged in relief and rehabilitation activities in Manica and Sofala provinces.

SOMALIA - Civil Strife

Date: Fighting intensified in December 1989

Location: Northern Somalia

No. Dead: Exact number unknown, but estimates put it at more than 5,000

No. Affected: 100,000 Ethiopian refugees, and 140,000 Somalis in northern Somalia

Total USG Assistance: \$16,615,250

The Disaster

Civil strife intensified in northern Somalia between the Somali Army and rebels loyal to the Somali National Movement (SNM) in December 1989. All normal economic activities in the affected areas ceased, and living conditions were difficult. Reports from the distressed zones indicated that 240,000 people were at risk from starvation and continued violence.

(Northern Somalia was also the refugee center for many Ethiopians who earlier fled the fighting in their country.)

This latest crisis was caused by the continued dissatisfaction with and resentment of the government of President Siad Barre, who came to power in a military coup d'etat in 1969. Opposition political groups within and outside the country accuse him of running the country capriciously and favoring his family and clan members. Arbitrary imprisonment, torture, and extrajudicial executions are reported to be common under his regime.

During the intense periods of fighting, relief operations in northern Somalia were extremely difficult. Security for relief personnel transporting goods to affected areas was inadequate. The emergency situation was further complicated by the Somali government's unwillingness to facilitate the distribution of relief assistance to areas controlled by its enemies.

Assistance Provided by the U.S. Government

In response to the need for immediate relief assistance, U.S. Ambassador T. Frank Crigler declared northern Somalia a disaster area on Jan. 22,

1990. He requested food and logistics support to assist the victims.

OFDA dispatched a small plane from Ethiopia to transport relief personnel traveling to the distressed north. A.I.D.'s Office of Food for Peace (FFP) provided 37,354.8 MT of P.L. 480 food in response to the Somali emergency. The cost of the FFP donation was estimated at \$10,449,200.

The U.S. State Department's Bureau for Refugee Programs provided \$2,620,000 through UNHCR to assist the Ethiopian refugees in Somalia. It also donated \$1,725,000 in response to ICRC emergency appeals. Special additional contributions were made from the Emergency Refugee and Migration Assistance Fund (ERMA): a total of \$1,700,000 was donated toward UNHCR's resettlement program in Somalia; another \$121,050 was provided to UNDP for operational costs of the small plane sent by OFDA from Ethiopia.

| | |
|--------------|---------------------|
| TOTAL | \$16,615,250 |
|--------------|---------------------|

Assistance Provided by the International Community

ICRC - implemented a repatriation program for Ethiopian refugees in northern Somalia and also coordinated a large relief operation in the affected areas.

UNHCR - provided emergency relief assistance to the refugees in northern Somalia.

(Note: The government of Siad Barre was overthrown subsequent to the completion of this report. Readers should refer to 1991 Somalia situation reports or the FY 1991 Annual Report for information on further developments.)

SOUTH AFRICA - Civil Strife

Date: 1989-1990

Location: Bophuthatswana, Lebowa, Venda, Gazankulu, Kwa-Ndebele, Kangwane, Kwa Zulu, Transkei, and Ciskei homelands and townships in Cape, Orange Free State, Natal, and Transvaal provinces

No. Dead: Estimated 3,000 killed as a result of political violence

No. Affected: 1,800,000 required emergency food assistance

Total USG Assistance: \$500,000

The Disaster

The year 1990 was a period of tremendous political change, but for many black South Africans it remained a day to day struggle with poverty, hunger and violence. The release of Nelson Mandela and other political prisoners and the legalization of the African National Congress raised expectations for the eventual elimination of apartheid, but at the same time sparked brutal intra-racial rivalries among black political and tribal groups. By the end of 1990, over 3,000 black South Africans met with violent deaths in a continual spiral of inter-tribal killings and reprisals. This civil strife uprooted tens of thousands of people, mostly women and children, and forced them into destitution marked by hunger and substandard living conditions.

This intensification of violence exacerbated the already poor living conditions of millions of black South Africans. The combination of rising unemployment and rapid inflation caused almost 2 million South Africans to be dependent on donated food rations. In some urban areas and townships, unemployment was estimated as high as 70%. The remittances that hundreds of thousands of migrant laborers sent back to their families were severely curtailed. In addition, the inflation rate was estimated to be between 15% and 25% and the retail price of maize meal rose to levels beyond the means of many black South Africans. Drought also took its toll on food production. Both cereal crops and livestock herds were decimated by several years of poor rains.

Malnutrition, which normally runs at about 70% for black children from one to five years of age, was reported on the increase. It has been estimated that over 26,000 children die from malnutrition and related diseases each year in South Africa, a country that is normally a net exporter of basic grains.



Children displaced by inter-tribal fighting near Durban
Photos by Joseph Gettier, AID/OFDA

Action Taken by South African Non-Governmental Organizations

Operation Hunger, a multi-racial, non-political NGO, manages the largest emergency feeding program in South Africa. Operation Hunger works independently of the South African government and homeland authorities and relies on donations from local businesses, church groups, public fund raising campaigns, and foreign donors. It responds only to community requests for assistance and distributes food rations through schools, churches, and other designated outlets. Operation Hunger also manages self-help gardening projects in the homelands, designed to relieve community dependence on food aid.

In 1990, Operation Hunger fed approximately 1.4 million people. By the end of the year, an additional 400,000 people were on the waiting list. Since the start of Operation Hunger's feeding program, the child mortality rate has significantly decreased.

Assistance Provided by the U.S. Government

For the fifth consecutive year, the USG provided assistance to Operation Hunger's feeding program inside South Africa. On Oct. 13, 1989, U.S. Ambassador William L. Swing redeclared the disaster, responding to "the grave situation faced by thousands of legally disadvantaged South Africans as a result of civil strife and displacement and a slowly developing catastrophe caused by nature and man's neglect." OFDA sent a mission allotment of \$500,000 to USAID/Pretoria to execute a grant with Operation Hunger. In March 1990, an OFDA team visited South Africa and inspected the Operation Hunger program.



Operation Hunger supported community gardens

TOTAL **\$500,000**

Assistance Provided by U.S. Voluntary Agencies

Presbyterian Hunger Program - donated \$118,000 to Operation Hunger programs.

TOTAL **\$118,000**

Assistance Provided by the International Community

Switzerland - contributed \$165,000 to Operation Hunger.

United Kingdom - gave \$252,000 to Operation Hunger.

Welthungerhilfe (German PVO) - provided about \$2,025,000 to Operation Hunger.

TOTAL **\$2,442,000**

SUDAN - Civil Strife/Displaced Persons

Date: 1989-1990

Location: Civil Strife in southern Sudan; displaced persons in the south, Southern Darfur and Kordofan Provinces, Central Province, and Khartoum

No. Dead: Not reported

No. Affected: 4,500,000

Total USG Assistance: \$31,852,207

The Disaster

A mixture of religious, racial, political and economic tensions has resulted in civil war in Sudan for most of its history since independence in 1956. The Government of Sudan (GOS) has waged the current war with the Sudan People's Liberation Army (SPLA) since 1983. The SPLA is dominated by members of the Dinka tribe, the largest tribe in southern Sudan. In its fight against the insurgency in the south, the government exploited tribal tensions by arming traditional enemies of the Dinka tribe. Civil war and heightened tribal conflict disrupted agricultural and economic activity throughout the southern war zone (Bahr El Ghazal, Upper Nile, and Equatoria Regions) and in parts of the transitional zone (Southern Kordofan and Southern Darfur Provinces), forcing millions of people to flee their homes. Estimates in 1990 of the number of displaced persons in the south, in the transitional zone, and in Khartoum ranged from 3 million to 4.5 million including more than 1 million in Khartoum. The United Nations estimated that between 4.4 million and 4.5 million people would need relief and rehabilitation assistance during 1990. In addition, there were at least 500,000 Sudanese refugees reported in Ethiopia, Uganda, Zaire, and the Central African Republic.

In 1989, the United Nations launched a multi-national relief effort which was referred to as Operation Lifeline Sudan (OLS). The first phase of OLS (OLS I) delivered an abundance of relief assistance to government and SPLA-controlled areas. (For details of OLS I see "Sudan Civil Strife," *FY 1989 OFDA Annual Report*.) The successes of OLS I were attributed in large part to the *de facto* cease-fire

between the GOS and SPLA which lasted throughout most of 1989. This period of peace ended with the SPLA's attack on Kurmuk in October 1989, after which the GOS suspended all relief flights in Sudan except those serving the government-held towns of Juba, Wau and Malakal.

In an effort to restart relief operations, the United Nations organized the OLS II conference, originally set for Nov. 28, 1989, on Mar. 26, 1990. At the conference, the GOS, donors, and the United Nations agreed to a plan of action modelled closely after that used in OLS I, which would rely heavily on airlifts and truck convoys to Equatoria Province, the rail corridor into Bahr El Ghazal Province, and barges navigating the Nile River in Upper Nile Province. In addition to delivering emergency food and non-food assistance to affected towns, OLS II also advocated an expansion of immunization and community health programs, reconstruction of water and sanitation systems, and provision of cattle vaccinations. Because many issues remained unresolved after the OLS II conference, relief operations were continually plagued by operational, administrative, and political constraints throughout 1990, with the restrictions on flight operations being the largest obstacle to the relief operation.

While ICRC activities in Sudan were kept separate from OLS, due to the ICRC's special mandate, its programs were complementary and closely coordinated with the U.N. effort. ICRC flights had served 21 locations in southern Sudan in 1989. However, all ICRC flights were suspended on Nov. 4, 1989. ICRC flights to Wau and Malakal (GOS), and Kongor and Ler (SPLA) resumed for a brief period the first week of April but were grounded again by the GOS during the last three weeks of the month. Relief flights resumed on May 4, 1990, traveling from Khartoum to Wau, Malakal and Juba; and from Lokichokio (Kenya) to Bor, Kongor, and Ler. GOS permission for ICRC transport of seeds and tools with C-130 aircraft was not granted until late in May, but these flew only to the GOS towns. Finally, the GOS suspended ICRC flights to SPLA towns late in September 1990, which forced the ICRC to stop serving GOS towns as well. The GOS also restricted U.N. relief flights. All U.N. light aircraft, including Twin Otter aircraft serving southern Sudan, were

suspended from Nov. 4, 1989, through Apr. 8, 1990. On Sept. 2, 1990, all U.N. flights to the south were halted again.

Efforts to deliver relief food by train and barge to southern Sudan were unsuccessful in 1990. A train in Babanusa loaded in September 1989 was finally allowed to depart for Aweil on Aug. 19, but never reached its destination. Barges from Kosti and Renk never reached Malakal due to constant disputes between the GOS and SPLA over food allocations. The GOS prohibited ICRC's use of a barge donated by the Norwegian Red Cross, which was intended to transport relief goods between Bor, Yirol, and Ler.

NGOs working in Sudan continually faced difficult operating conditions, including restrictions on the use of radios, lack of fuel, security concerns, travel constraints, delays in obtaining the higher exchange rate, and difficulties clearing relief items through customs. Tribal clashes and escalated military activity in the transitional zone forced many NGOs to cease relief operations in the area.

In August the U.N. revised OLS II target food deliveries based on field assessments; 73,192 MT were targeted for GOS-held areas and 18,965 MT for SPLA-held areas. About 70% of that target was estimated to have been delivered by August. In addition to the delivery of emergency food, the plan called for delivery of 4,500 MT of seeds and tools during the first quarter of 1990, divided equally between GOS and SPLA-held towns.

Rains in Darfur Province, Kordofan Province, and areas east of Khartoum were late and less than average in the summer. Rains were insufficient and very erratic in May, June, and early July in the following provinces: Central Region, Blue Nile, Upper Nile, Jonglei, and parts of eastern Bahr El Ghazal. Many of the seeds distributed under OLS II failed to germinate due to the poor rains. (For a detailed description of the drought conditions, see "Sudan Drought/Civil Strife," *FY 1991 OFDA Annual Report*.)

Equatorial/Jungle Provinces: Heightened military activity in Equatoria forced an influx of people into the GOS garrison town of Juba. The displaced population in Juba rose from 185,000 in January to

over 200,000 late in the year. The town remained dependent on relief flights from Kenya, Uganda, and Khartoum throughout 1990. Because these flights were often suspended, the town's food stocks were very low by December.

Road transport of food to Equatoria included CRS and WFP convoys into eastern Equatoria from Kenya and WFP convoys into western Equatoria via the towns of Yambio, Kaya, and Kajo Keiji. Poor infrastructure and heightened military activity greatly hampered movement of these convoys.

An estimated 140,000 people were affected in the following towns west of Juba: Yei, Mundri, Tembura, Ezo, Yambio, Ibba, and Maridi. Some relief food was transported to Yei late in 1989 via military-escorted convoys from Kaya. The SPLA's capture of Kaya in February and subsequent attack on Yei eliminated the option of road transport to Yei and Juba and forced a massive exodus of people from Yei. In August, Oxfam/UK reported heightened malnutrition in Kaya.

Field visits in September 1990 to towns east of Juba, including Kaya, Lasu, Chokudum, Kimatong, and Kapoeta, indicated that food security was precarious due to failed plantings resulting from unfavorable weather conditions.

GOS military actions interrupted OLS activities in the south. The Sudanese air force bombed Torit on June 5, hitting the ICRC hospital and a school. Between Sept. 20–24 the Sudanese air force bombed several SPLA-held towns in southern Sudan which hosted U.N. and ICRC relief teams. Several bombs were also dropped on towns in November, including several assaults on Bor and Torit.

Bahr El Ghazal Province: With little access to Bahr El Ghazal, estimates of the numbers of affected people were difficult to obtain. A total of 1,500 MT of emergency food was targeted to reach Aweil by train, but never reached its destination. Relief stocks in Aweil were thought to be exhausted by late February, except for a small amount reserved for a special feeding program for the most vulnerable population. A good November 1989 harvest was reported around Aweil. However, food shortages north of Aweil prompted large population movements to Southern



Taposa woman and child outside OFDA-funded child immunization clinic near Kapoeta

Photos by Michael Harvey, AID/OFDA

Kordofan Province; in late August, 100 persons a day were fleeing Mayen Abun northward.

All relief food in Wau came from ICRC stocks. The ICRC reported a satisfactory nutritional situation in the town in May, but remained concerned throughout the year about rising food prices, suspension of relief flights, and restrictions on the use of radios. Child deaths due to diarrheal diseases peaked in August, averaging two per day according to a report received that month.

Upper Nile, Blue Nile, and Central Provinces: A precarious security situation in and around Malakal prompted the evacuation of most expatriate staff in early February. The Regional Governor took over relief stocks and began distributing food without consulting the local relief committee (LRC). By August food shortages were severe, with sorghum only available in the black market. The ICRC reported that between 50,000 to 61,000 people required emergency food aid. ICRC began an airlift of 1,000 MT on Aug. 12 and began food distribution on Aug. 14. The ICRC halted the airlift on Sept. 26 after the GOS suspended flights to SPLA towns. Water supply and delivery in the town was also very poor. A

census conducted in September 1990 indicated there were close to 100,000 displaced persons in the town.

Food security deteriorated in rural areas of the Blue Nile Province late in 1990 due to poor weather conditions. Sudan's Relief and Rehabilitation Commission (RRC) reported high malnutrition rates, consumption of wild foods, and high grain prices around Kurmuk.

By the end of the year, Kosti had a total of 98,000 displaced persons; 38,000 lived in three camps on the outskirts of town, and 60,000 were settled in the town. Health surveys showed a dramatic increase in children requiring supplementary feeding and in child mortality.

Southern Kordofan: USAID began land transport of relief food to towns in the transitional zone late in 1989, although convoys were delayed due to insecurity and a shortage of fuel. The regional stock in Muglad served as a transit point for food bound for Muglad, Babanusa, Abyei, Meiram, and other towns in the transitional zone, as well as for the train intended to serve Bahr El Ghazal. Efforts to prepare locations in the transitional zone for a potential influx of displaced persons from the south were halted early in the year, due to the security situation and the fear on the part of the Governor of Kordofan that such activities would encourage an influx.

Abyei is the highest risk area in the transitional zone, due to its isolation during the rainy season. A total of 2,500 MT of relief food was delivered early in the year. Donors dispatched additional convoys to stockpile enough relief food before the rains. The number of displaced persons in Abyei rose from about 40,000 in January to 45,000 in May. Seeds were distributed by the Sudanese Red Crescent Society (SRC) and drugs were stockpiled in the town before the rains came. The number of displaced persons reached more than 55,000 by mid October, although many of them returned to their farms to harvest crops.

General nutritional conditions among displaced persons in Muglad and Babanusa remained good throughout the year; most deaths were due to disease. In En Nahud there were 18,000 registered and non-

registered displaced persons in May. During that month these displaced persons were moved to a new camp north of the town. The new camp did not accept additional displaced persons and stipulated that people would only receive aid for a maximum of six months. Displaced persons were also being cared for in Kadugli and Meiram.

Khartoum: Estimates of the number of displaced persons in the Khartoum metropolitan area ranged between 1 million and 1.8 million for most of the year, although the higher estimates may have included Ethiopian refugees. Late in the year, there was a large influx of displaced persons into Khartoum due to famine conditions throughout most of the country. Several NGOs worked with the Khartoum displaced in supplemental feeding, preventive health, and education programs, although their efforts were hindered by difficulties in obtaining fuel allocations. Improved water supply was the most immediate need in Khartoum.

The GOS initiated a controversial return program early in 1990 which aimed to relocate about 50,000 displaced persons from Khartoum to the south. The military reportedly used intimidation tactics to force many of the displaced persons out of Khartoum. Furthermore, the GOS attempted to lure people south by promising them assistance from the international community once they returned to the south; such promises had not been insured by the international community. Donors expressed a willingness to support a return program for displaced persons if it was well planned. The following prerequisites would be necessary: relocation was to be voluntary, the GOS was to provide transport, and displaced persons were not to be relocated to war-torn areas of the south.

Action Taken by the Government of Sudan (GOS) and Non-governmental Organizations

The GOS appealed to the international community for assistance to manage relief efforts for people displaced by civil war. In cooperation with the U.N., the GOS convened the Mar. 26 OLS II donor meeting where several of the GOS ministries were represented. The meeting focused on the reaffirmation of the principles that were outlined in the OLS I plan of action in 1989. It was agreed that the GOS, through

its Ministry of Relief and Displaced Persons Affairs, would have coordination responsibility for all aspects of food and non-food inputs designated in the OLS II document.

Three government committees in Khartoum dealt with OLS issues. The Acting Commissioner of the RRC chaired the Food Donor Group which reviewed and sought solutions to major OLS issues. Representatives of Military Intelligence, Security, and the Ministry of Foreign Affairs attended the Food Donor Group meetings, as well as the U.N. Secretary General's Special Representative. Another committee, which comprised senior officials and technical-level staff from the RRC and Ministries of Finance, Social Welfare, Security and Customs dealt with OLS administrative matters. Finally, an operations policy group met regularly to resolve OLS policy issues at the ministerial level.

The RRC and regional governments oversaw relief food transportation, distribution, and monitoring in the transitional zone and in government garrison towns. The LRCs at distribution centers in Southern Kordofan and GOS-held towns in the south were responsible for supervising the final allocation and distribution of relief supplies and rehabilitation inputs, although reports indicate that regional and local government officials often usurped the power of the LRCs. Membership of these LRCs typically included an RRC representative, who usually served as committee chairman; a local authorities representative; a representative of the Ministry of Health (MOH); and representatives of locally active NGOs.

The GOS offered a special exchange rate (12.2 Sudanese Pounds to the dollar) to organizations and donors contributing to OLS and agreed to waive customs duties on relief supplies and aircraft that arrived in country for OLS activities.

The Sudanese Red Crescent (SRC), in cooperation with the League of Red Cross and Red Crescent Societies (LRCS), headed a consortium of NGOs which provided relief in Southern Kordofan and assisted in food distributions to displaced persons in the province.

CART, a consortium of mostly Sudanese NGOs, distributed food, seeds, and tools to the needy in and around Juba. Members of CART included Sudanaid, the Episcopal Church of Sudan (ECS), the Islamic African Relief Agency (IARA), the Sudan Council of Churches (SCC), and Oxfam/UK. Sudanaid and SCC also ran programs in Upper Nile, Bahr El Ghazal, and Khartoum.

Assistance Provided by the U.S. Government

On Oct. 19, 1989, U.S. Ambassador G. Norman Anderson declared a disaster for civil strife due to the emergency needs of the people displaced by continued fighting in the south.

OFDA, A.I.D.'s Office of Food for Peace (FFP), and the Department of State's Bureau for Refugee Programs (RP) worked together to channel food and financial support to relief efforts in Sudan.

OFDA Assistance

Through grants to the U.N. and NGOs, OFDA funded OLS II activities in the following areas: food and non-food logistics; NGO projects; OLS staff support; water and health; seeds and tool distribution; and cattle vaccinations.

Logistics: Through a grant to Lutheran World Relief (LWR) OFDA supported the LWF food airlift to Juba from Nairobi, Kenya. WVRD received a grant for moving OLS food into the south (the Kapoeta area) via land routes. OFDA also supported food logistics via land routes in the north through a contract with CARE. CARE monitored USG food stocks in Sudan and arranged for the transport of USG food from stocks in Port Sudan and Gedaref to the transitional zone. Furthermore, OFDA funded the purchase of Rubb Hall tents for food storage in Muglad. In addition to food logistics, OFDA provided funding to UNICEF and UNDP for the use of Twin Otter aircraft operated by Air Serv pilots to shuttle relief personnel and non-food items in the south and north. UNICEF used one Twin Otter out of Lokichokio, Kenya, for southern Sudan, and UNDP used another Twin Otter out of Khartoum for the transitional zone.

NGO Consortium Activities: OFDA provided an umbrella grant to LRCS for selected relief activities

implemented by NGOs in Southern Kordofan, Juba, and Khartoum. The LRCS consortium included the following agencies: SRC, AICF (France), CONCERN (Ireland), GOAL (Ireland), MSF/Holland, MSF/Belgium, MSF/France, and SCF/UK. Several projects were funded under the LRCS grant, including wet and dry feeding, food logistics, water and sanitation, and primary health.

Staff Support: OFDA provided funding to cover salaries, transportation, and administrative costs associated with 32 WFP monitors under OLS II. OFDA also gave a grant to UNDP for OLS staff support in Khartoum. Finally, OFDA paid for several TDY staff to assist USAID/Khartoum in managing the USG relief efforts. Through an existing contract with the U.S. Forest Service OFDA provided a field person to the mission for three months before the summer to enhance the mission's capacity to monitor and evaluate field activities funded by the USG.

Water and Health: OFDA contributed funding to UNICEF for the health component of its program for the Khartoum displaced persons. UNICEF's program was implemented by several NGOs and included projects in public health, supplemental feeding, and nutrition surveillance. OFDA also funded UNICEF-run health projects in the south. IRC's health program in the Kapoeta area, which was started in 1989, received additional support from OFDA in 1990. IRC immunized children, trained and supported local health workers, and provided supplementary feeding. Likewise, OFDA funded the LWR water project in southern Sudan for the second year in a row. LWR completed 20 new wells in southern Sudan in 1990. Finally, OFDA funded a nutrition and medical program in Kajo Keji through a grant to the American Friends of AICE

Seeds and Tools: OFDA funded a CRS program to distribute seeds and tools in Equatoria province. Seeds and tools distribution in southern Sudan was also supported through an OFDA grant to UNICEF. Finally, OFDA gave UNICEF a separate grant to purchase urgently needed fishing equipment for the south.

Cattle Vaccination: In keeping with OFDA's priorities to support sustainable famine mitigation activities,



Children draw water from an OFDA-funded well in Torit

grants to WVRD were made for cattle vaccination programs in southern Sudan.

FFP Assistance

Most of the USG assistance provided to Sudan in 1990 was in the form of food. FFP signed a Title II Section 202 grant agreement with the GOS in which 45,700 MT of wheat were shipped to Sudan. Local currency that was generated by the sale was used by USG for relief operations in country. FFP also concluded an agreement with Kenya's National Cereals and Produce Board in which 16,000 MT of USG-provided wheat was swapped for locally produced sorghum, maize, and beans. Commodities were delivered to southern Sudan by CRS and WVRD. Finally, FFP donated 3,167 MT of food to WFP for distribution in southern Sudan. Much of the food delivered for OLS II was carry-over stock provided out of 1989 food shipments, the value of which was accounted for in the *FY 1989 OFDA Annual Report*.

RP Assistance

In 1990, RP provided \$18.2 million to ICRC for its African assistance programs, a portion of which was for operations in southern Sudan. Also, included in this total was a contribution of \$2 million from the Emergency Fund to ICRC Horn of Africa programs, a portion of which was targeted for operations in southern Sudan. (RP contribution is not included in the total USG assistance).

Summary of USG Assistance

OFDA Assistance

| | |
|--|-------------|
| Grant to WFP toward funding for 32 monitors for OLS II | \$700,000 |
| Grant to LWR for LWF airlift to Juba | \$500,000 |
| Grant to LWR for water project | \$250,472 |
| Grant to UNICEF for use of Air Serv Twin Otter in the south | \$1,368,000 |
| Grant to UNICEF for seeds and tools program in the south | \$1,200,000 |
| Grant to UNICEF for fishing equipment in the south | \$70,000 |
| Grants to UNICEF in support of OLS projects in the south (veterinary services, EPI, health, and distribution of seeds and tools) | \$582,279 |
| Grant to UNICEF for health program in Khartoum | \$500,000 |
| Grant to UNDP for OLS staff support in Khartoum | \$300,000 |
| Grant to UNDP for use of Air Serv Twin Otter in the north | \$330,000 |
| Grant to LRCS for NGO relief programs | \$2,250,000 |
| Grant to CARE for food aid monitoring and logistics | \$588,837 |
| Grant to WVRD for cattle vaccination program in the south | \$287,865 |
| Grant to WVRD for food transport to the south | \$273,919 |
| Grant to IRC for health program in the south | \$316,638 |

Grant to CRS for seeds and tools distribution..... \$805,813

Grant to American Friends of AICF for nutrition and medical program in Kajo Kaji \$204,500

Funding for Rubb Hall tents for storage of relief commodities in Muglad \$267,000

Funding for support of contractor and TDY support staff in Khartoum..... \$309,054

Funding for travel of TDY personnel to Washington\$10,830

FFP Assistance

45,100 MT of wheat swapped with GOS program value \$10,392,500

16,000 MT swapped with Kenya program value\$9,515,000

3,167 MT donated to WFP program value \$829,500

Total OFDA\$11,115,207

Total FFP.....\$20,737,000

TOTAL \$31,852,207

Assistance Provided by U.S. Voluntary Agencies

ADRA - assisted displaced persons in Khartoum in the area of health and nutrition.

ARC - provided personnel, supplies and financial support to LRCS. Total amount of ARC relief assistance came to \$50,000, not including the assistance to refugees in the Wad Sheriff area.

Air Serv International - provided crew and aircraft for the transport of relief supplies and personnel in Southern Kordofan and southern Sudan.

CARE - managed the transport and delivery of relief food to agencies feeding displaced persons north of the conflict zone.

CRS - delivered food and non-food items by road to southern Sudan.

IRC - ran health programs in Eastern Equatoria Province, concentrating on training community health workers in rural areas, immunizations, and cattle vaccinations.

Oxfam America - worked in the Chukudum area, the Juba area, and Raga and spent \$151,605 in 1990 on seeds and tools procurement, transport, and distribution in southern Sudan.

LWR - drilled and rehabilitated wells in southern Sudan and contributed to the LWF airlift.

WVRD - delivered food and non-food supplies to southern Sudan by truck.

TOTAL \$201,605

Assistance Provided by the International Community

International Organizations

EC - pledged \$6,861,740 to OLS and donated 6,250 MT of food valued at \$843,750.

ICRC - delivered food and non-food assistance to government and SPLA towns in southern Sudan. ICRC also carried out two major relief operations in August and September in Ler and Malakal when serious food shortages struck there.

LRCS - coordinated a consortium of international NGOs that provided relief to displaced persons in Southern Kordofan, Khartoum, and Juba.

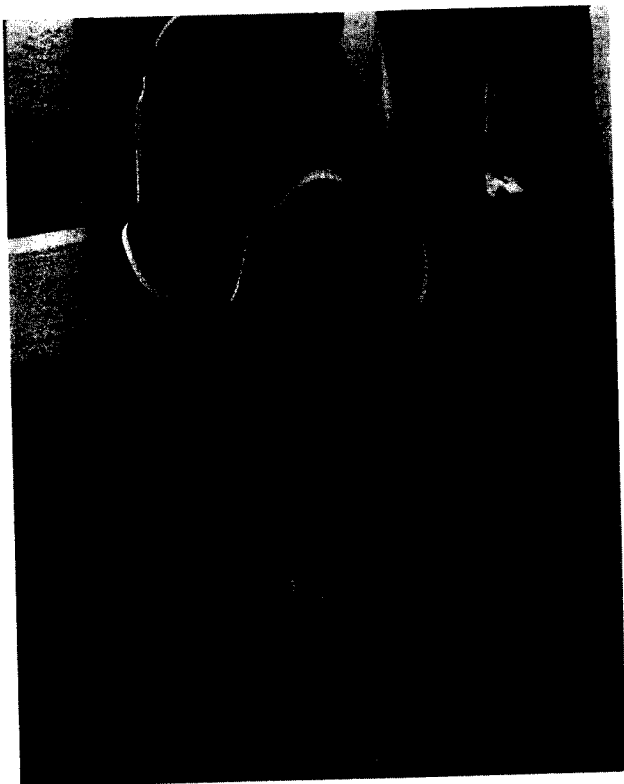
LWF - ran the Nairobi/Juba airlift.

UNDP - provided 17 OLS personnel in Khartoum and 1 in Nairobi.

UNICEF - issued an appeal to support its efforts to improve basic health, water and sanitation, and education services for displaced persons and Sudanese affected by war in the south. UNICEF

provided 9 OLS personnel in Khartoum and 39 in Nairobi/Kampala.

WFP - ran the Entebbe/Juba airlift and coordinated food deliveries in southern Sudan and Southern Kordofan. WFP donated 10,629 MT of food, valued at \$2,123,630, and provided 30 OLS personnel in Khartoum and 49 in Nairobi/Kampala.



Child outside Bor is immunized against childhood diseases in a UNICEF program supported by OFDA

WHO - provided OLS personnel.

Governments

Australia - pledged \$679,351.

Austria - donated, through WFP, 4,000 MT of food valued at \$540,000.

Canada - pledged \$666,667 and donated 6,925 MT of food valued at \$1,552,625.

Denmark - pledged \$551,000.

Finland - pledged \$3,228,995.

France - pledged \$170,000.

Germany - pledged \$4,678,505.

Italy - pledged \$1,000,000 and donated 2,000 MT of food valued at \$270,000.

Japan - pledged \$1,803,759.

Luxembourg - pledged \$78,740.

Netherlands - pledged \$7,832,781.

Sweden - pledged \$3,362,500.

Switzerland - pledged \$60,500.

United Kingdom - pledged \$2,634,000.

Non-Governmental Organizations

AICF (French) - provided health and feeding services to displaced persons in Kadugli and other locations of the transitional zone; and worked around Juba in the areas of health, nutritional surveillance, and water and sanitation.

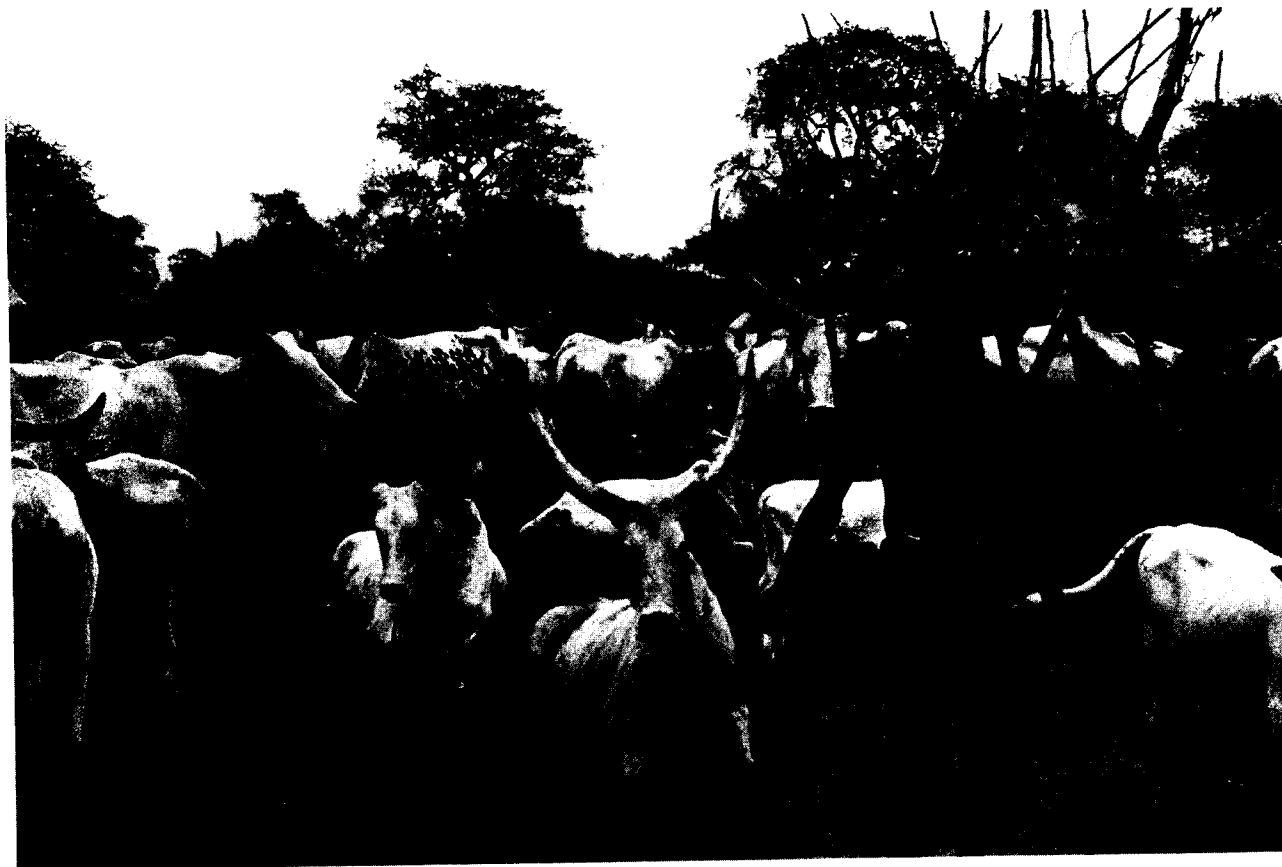
CONCERN (Ireland) - coordinated food logistics out of Muglad for Southern Kordofan and conducted feeding programs, assisted in water rehabilitation, and helped in voluntary relocation efforts. CONCERN also supported staff in Renk.

GOAL (Ireland) - distributed food and provided assistance to displaced persons in Khartoum; and worked in Juba in the area of health.

Medecins sans Frontieres (MSF)/Belgium - supported relief projects in Abyei and other locations in the transitional zone.

MSF/France - provided health services to displaced persons in Aweil until personnel was evacuated; and supported relief projects in the transitional zone.

MSF/Holland - assisted displaced persons in the transitional zone, Juba, and Renk; and worked in Wau in the area of health.



OFDA grants supported a cattle vaccination program in southern Sudan

Norwegian People's Aid (NPA) - distributed food in southern Sudan.

OXFAM/UK - worked with displaced persons in southern Sudan.

SCF/UK - assisted displaced persons in the transitional zone.

(Note: Figures under International Assistance are taken from the U.N. Report of the Secretary General, Emergency Assistance to the Sudan and OLS, Oct. 8, 1990. In addition to these U.S. dollar contributions, various foreign governments contributed a total of 18,239,732 Sudanese Pounds to the relief effort.)

Pledges (29,804 MT)\$5,330,005

Total Non-food Pledges..... \$33,608,538

TOTAL \$38,938,543

TANZANIA - Floods

Date: April 1990

Location: Southeast Tanzania and around Mount Kilimanjaro

No. Dead: 183

No. Affected: 142,000, with 29,000 homeless

Total USG Assistance: \$24,990

The Disaster

Inclement weather and unceasing rains in April 1990 caused serious flooding in southeastern Tanzania. Particularly hard hit were coastal areas of Lindi and Mtwara regions and the Tanga Region, home to Mount Kilimanjaro.

In Lindi and Mtwara regions, 142,000 people were affected; of these, 69 people perished and 20,040 individuals were made homeless when 6,000 homes were swept away. Some 110 victims were reported missing and presumed dead. In Kilimanjaro Region, Moshi and Rombo districts reported four deaths, 868 people homeless, and 222 homes destroyed or damaged.

The inundations destroyed many bridges and roadways throughout the affected districts, hampering relief efforts and temporarily preventing access to Mtwara, Newala, and Masasi. Rehabilitation to bridges alone was estimated to cost \$4.1 million. Railways also were damaged. The rains caused large landslides which blocked roads and frustrated the transportation of relief goods.

The disruption of roads was expected to cause food shortages, especially if affected areas did not receive fast-growing seed to replant as soon as possible for July harvest or later for the December harvest. The regions of Mtwara and Lindi are major cashew nut producers, and about 85% of farmers in the affected regions depend on cashews as their cash crop. As a result, many of those not directly affected came to depend on assistance since they no longer had the cash to purchase food. The Government of Tanzania (GOT) placed a priority on food aid and sought some

10,000 MT of maize and beans to feed 53,000 of the victims.

Action Taken by the Government of Tanzania (GOT) and Non-Governmental Organizations

The GOT launched relief operations, mustering police helicopters, canoes and boats for the rescue work and delivery of relief supplies. On Apr. 16, President Ali Hassan Mwinyi appealed for assistance. His disaster declaration was bolstered by an UNDRO assessment which verified the urgent need for relief support. The Ministry of Health, with assistance from WHO, UNICEF and the U.S. refugee coordinator, managed medical assistance while WFP and the EC reviewed food aid requirements.

The President also organized a Disaster Coordination Committee comprising five technical committees to address the issues of food, seed, communications, medicine, and water. In addition, both regions established their own local disaster management teams.

Military and national service repair teams were mobilized to work on housing reconstruction and road and bridge repair. Equipment in the isolated districts was damaged and unavailable for digging outward toward lesser affected regions. As a result of this disaster, legislation was passed establishing a permanent disaster coordination unit in the Prime Minister's Office which receives funds from the GOT budget.

Since there was a great need for emergency food, the GOT had supplied 2,200 MT of cassava, maize, and beans and had flown in some medicine to the flood victims by Apr. 19. One NGO supplied 19 MT of Katumani - a fast-growing variety of maize seed - and 2 MT of sorghum seed to Lindi Region to prevent the need for future food aid. Moreover, a team of four experts was sent to assess damage to water supply systems. The GOT provided nine villages with hand pumps to dig shallow wells.

Due to unprecedented media coverage of a national disaster, the Tanzanian people responded generously. Among other donations, approximately \$14,000 was raised by 24 business people, the Cooperative Union

contributed \$1,000 for the purchase of rice, and a church in Ruvuma donated \$1,300 in blankets and clothes.

Responsibilities for relief operations were divided in the following manner: CRS managed efforts in six villages in Lindi with support from the Tanganyika Christian Relief Services (TCRS); Caritas handled the 15 affected villages in Mtwara District; the Tanzanian Red Cross (TRC) operated in Newala managing 13 villages and in Masasi with 42 villages. The TRC also sent an assessment team to Mtwara.

In addition to supporting CRS, the TCRS was very active in disaster operations and provided tents, clothes, \$10,000 in cash, and 21 MT of Katumani maize seed for Lindi.

Assistance Provided by the U.S. Government

On Apr. 20, 1991, U.S. Ambassador Edmund DeJarnette declared that a state of emergency existed and contributed \$24,990 for the partial transportation costs and the purchase of 17 MT of Katumani seed from Kenya. The seed arrived in Mtwara on May 18. Also, USAID/Tanzania pledged to assist with local currency through P.L. 480 counterpart funds for NGO relief operational costs. USAID/Tanzania personnel participated in the food, seed, and communications sub-committees established by the GOT Disaster Coordination Committee.

TOTAL **\$24,990**

Assistance Provided by U.S. Voluntary Agencies

ARC - furnished \$8,562.

CRS - donated medicine worth \$8,500 for Lindi, 150 MT of maize, and 15 MT of beans.

WVRD - sent medicine, food, temporary shelter, and clothes, all worth \$130,000.

TOTAL **\$147,062**

Assistance Provided by the International Community

International Organizations

EC - channeled \$517,000 through NGOs for their operations, donated cooking utensils, relief supplies, and blankets, all valued at \$180,723, and assessed food aid requirements with WFP.

LRCS/TRC - gave \$155,000, 240 tents, 11,000 blankets, medical kits, and household utensils.

LWF/TCRS - provided 30 bales of blankets and 146 bales of clothing.

Organization for African Unity - supplied \$50,000.

UNDP - furnished \$30,000.

UNDRO - contributed \$20,000 for the local purchase of relief items and coordinated an airlift of goods purchased by the Japanese government from the UNDRO stockpile in Pisa, Italy. The airlift arrived on Apr. 23, carrying 30 family and 10 group tents, 5 rolls of plastic sheeting, and 10 water tanks.

UNICEF - donated medicine worth \$40,000.

WFP - assessed food aid needs with the EC and provided 2,065 MT of maize, 275 MT of beans, and 90 MT of vegoil.

WHO/AFRO - sent 18 basic emergency kits and 2 supplementary emergency kits, all worth \$12,500.

Governments

Australia - gave \$50,000.

Canada - contributed \$43,103.

Cuba - supplied medicine.

Denmark - gave \$40,000 and a landcruiser.

Finland - furnished \$36,228 and 2,500 blankets worth \$38,213.

France - donated \$159,574 for the purchase of water tanks, pumping units, and chemicals.

Germany, Dem. Rep. - contributed medicine.

Germany, Fed. Rep. - donated \$58,824 to purchase medicine and 5 hand pumps to dig shallow wells.

Hungary - gave \$22,901.

Iran - supplied 500 kg. of dates, 1 MT of medicine, 800 tents, and 2,620 blankets.

Japan - furnished \$150,000, 810 kg. of medicine worth \$5,705 and transport valued at \$9,897. Japan also provided 6 MT of relief supplies from UNDRO's Pisa, Italy, depot for an UNDRO airlift (*see UNDRO*).

Libya - sent food and medicine.

Norway - donated \$113,636.

Saudi Arabia - sent 8,672 cartons of dates and other foodstuffs, 1,372 tents, and 3,000 blankets.

Sweden - gave \$34,000 and provided an additional \$334,000 for NGO operations in Lindi and Mtwara.

United Kingdom - sent relief supplies and water treatment equipment, all worth \$80,645.

Non-Governmental Organizations

Caritas - gave \$10,256, 100 MT maize, 10 MT beans, 40 bales of clothes, and medicine.

International Islamic Relief Organization - gave 790 bales and 100 cartons of clothes and 50 MT of maize.

International Rotary/London - sent 200 cartons of relief materials.

Irish CONCERN - supplied \$351,562.

Islamic African Relief Agency - provided 100 MT of maize and 100 tents.

MSF/Belgium - dispatched a logistician, a medical expert, and 10,000 medical kits, all worth \$25,000.

Oxfam/UK - contributed materials for communications networks and water systems.

The following chapters of the local Red Cross and Red Crescent societies furnished relief:

Australia - \$3,749

Canada - \$1,777

China, People's Rep. - \$12,373 for food

Germany (Fed. Rep.) - 1,150 blankets worth \$29,765

Finland - 2,500 blankets

Iceland - \$3,425

Japan - \$9,110

Netherlands - 24 basic health kits

Norway - \$8,562

Soviet Union - 500 blankets, 70 sheets, and 3,000 bowls

Sweden - 240 tents

United Kingdom - \$16,781

Shia Ithnaasheri Jamat - sent 3,000 MT maize flour and 40 MT pulses.

TOTAL

\$2,654,309

NIGER - Epidemics

Throughout Niger, particularly in the departments of Zinder, Tahoua, Maradi, and Dosso, and in the capital city of Niamey, local populations were ravaged by an unusually large and simultaneous outbreak of measles and meningitis that peaked from March through June 1991. From January through June 1991, the afflicted population totaled 80,297 for measles and 7,519 for meningitis, resulting in 1,862 deaths from measles and 819 deaths due to meningitis. The Government of Niger (GON)'s National Health Information System (SNIS) and MSF/France reported the above statistics.

MSF relief workers in Niger believed this double calamity to be the result of a combination of factors. The poor harvest in 1990 caused a severe dearth of food in the rural areas which increased and accelerated rural-urban migrations into the city. Due to the low vaccination rates in many rural areas and the overcrowded conditions in Niamey, the migrants were extremely vulnerable to the spread of the diseases.

On March 22, the GON and MSF arranged a meeting with international donors to assess the measles and meningitis crisis and appeal for emergency assistance. It was decided that although there was adequate meningitis vaccine in Niger, other medical equipment to treat both diseases, and operating funds were scarce. In response to specific MSF requests and the GON appeal, donors contributed vaccines and medical supplies, and provided funding to operate Department of Health Units and rural health centers during late March and early April.

USAID/Niger maintained close contact with MSF and the SNIS to remain informed of the measles and meningitis problems, and to monitor assistance being provided by other donors. Also, USAID/Niger researched a variety of activities which could be pursued by the GON to help it cope with the two epidemics. Thus, by the time of the GON's appeal for emergency assistance on March 22, USAID/Niger had already concluded that the crisis warranted USG support and had commenced discussions with MSF, the GON's designated conduit for international donor contributions and emergency services, to identify critical needs that the USG could address without duplicating the efforts of other donors in the area. As a result, U.S. Ambassador Carl C. Cundiff's disaster declaration on March 29 pledged \$32,000 under his Disaster Assistance Authority

toward the epidemic relief effort: \$27,000 to treat 15,000 cases of measles, and \$5,000 for logistics expenses within Niger for meningitis and measles treatment. Since actual expenditures ended up being only \$21,144, the balance of \$10,856 in unused funds was returned to OFDA.

Other donor contributions were as follows: the EC provided technical and administrative assistance and 300,000 doses of meningitis vaccine through MSF; UNICEF gave 100,000 doses of meningitis vaccine; and, through MSF, France supplied 100,000 doses of meningitis vaccine and medical supplies to treat 20,000 cases of measles. Information on the dollar value of these donations was not available.

TOTAL USG

\$21,144

NIGER - Food Shortage

Poor rains during the 1990 rainy season combined with parasite infestation resulted in severe regional food shortages in Niger. In many areas of the country, 1990 was the second year of poor harvests. Pasture and water conditions were also affected, hurting animal owners. The effect of the food shortage was exacerbated by the general economic recession affecting Niger. As grain prices rose and terms of trade for livestock fell, many people were unable to afford the market price for grain. In February, USAID/Niamey estimated that up to 1.63 million people would need emergency food assistance before the October 1991 harvest.

In December 1990, Niger's Foreign Minister requested USG assistance in responding to the impending crisis. The Government of Niger (GON) requested 160,000 MT of emergency food assistance, with 141,000 MT for settled populations and 18,000 MT for nomads, while a FAO/WFP assessment team recommended that 106,000 MT of relief food be supplied. Due to slow donor response and logistical complications, the bulk of relief food did not arrive until late spring or after. By this time, conditions had further deteriorated for the at-risk populations. However, the 1991 rainy season was more promising. By August 1991, prospects for the next year were less grim.

On Feb. 5, 1991, Ambassador Carl Cundiff declared a disaster in Niger due to severe regional food shortage:

USAID/Niamey used the Ambassador's Authority to make a \$16,000 grant to CARE for an emergency food-for-work program, and a \$6,000 grant to the LRCS for emergency food distribution. FFP also contributed 35,000 MT of sorghum, valued at \$12,171,500, to the GON for emergency feeding programs. Other donors included Germany, Belgium, and the EC, all of which funded the local purchase of relief food. Pakistan, Canada, Italy, Saudi Arabia, and England provided other emergency food assistance.

| | |
|------------------|--------------|
| Total OFDA | \$22,000 |
| Total FFP..... | \$12,171,500 |

| | |
|-----------|--------------|
| TOTAL USG | \$12,193,500 |
|-----------|--------------|

RWANDA - Displaced Persons

On Oct. 1, 1990, the Rwandese Patriotic Army (RPA), the military arm of the insurgent Rwandese Patriotic Front, invaded Rwanda from Uganda. The RPA force numbered approximately 7,000 and consisted almost entirely of Rwandese exiles who had been living in Uganda for many years. The invasion and subsequent fighting caused the displacement of an estimated 10,000 civilians and disrupted the local economy. Most severely affected was the Byumba Prefecture of northern Rwanda, the scene of much of the fighting.

IWACU, a Rwandan government-established cooperative agency that included a representative from the Ministry of the Interior along with representatives from 20 NGOs, coordinated relief assistance to the displaced civilians. The Rwandan Red Cross was also instrumental in the relief effort.

On Oct. 16, U.S. Ambassador Leonard Spearman declared that the situation in Rwanda warranted USG emergency assistance. The \$25,000 Ambassador's Authority was given to CRS to defray in-country transport and distribution costs of providing emergency supplies, including food, clothing, and blankets to the displaced in Byumba Prefecture.

The EC channeled a grant of \$900,000 through MSF/Belgium, which delivered food and other emergency aid to the displaced population. The EC also contributed \$273,000 to UNHCR, which had developed an emergency assistance plan, budgeted at \$1.4 million, for

the period beginning Oct. 1, 1990, through March 31, 1991. UNHCR provided \$125,000 to assist 1,000 Rwandan refugees in Burundi, 12,000 Rwandan refugees in Uganda, and 4,500 Burundi refugees in Rwanda move out of the conflict area. ICRC teams interviewed prisoners and conducted surveys in the north where fighting was reported. ICRC workers also distributed dressing material and medical kits to health centers in Ngarama and Kiziguro, and provided 10 MT of food to hospital patients and displaced persons. Other NGOs involved in the relief effort were CARE, Oxfam, Caritas, and the Belgian Red Cross.

| | |
|-----------|----------|
| TOTAL USG | \$25,000 |
|-----------|----------|

SWAZILAND - Drought

The late arrival of rains delayed the maturity of the maize crop, leaving Swaziland's southeastern region to face serious drought-induced food shortages for the second year in a row. From Lavumisa, north to Big Bend and west to Nhloya, a region inhabited by approximately 35,000 people, the anticipated poor harvests generated increased food prices, placing available food beyond the means of vulnerable populations. Deteriorating pasture conditions also caused many cattle deaths or left existing livestock in such poor condition that they could not be sold for cash to purchase food.

On Feb. 12, 1991, the Government of Swaziland (GOS) issued a donor appeal for funds to purchase 800 MT of local maize, for free distribution to vulnerable groups. Emergency distribution of the maize was scheduled to continue for two months, until the current crop was harvested in late April.

On Feb. 13, U.S. Ambassador Stephen Rogers declared that the drought constituted a disaster and requested his Ambassador's Authority fund to respond to the GOS donor appeal. USAID/Mbabane provided \$23,152 to the Central Cooperative Union, a local vendor, to purchase 116 MT of local maize for emergency distribution. Monitored by WFP, the Ministry of Agriculture and the Ministry of Works transported and distributed the food to 4,833 drought victims in areas near Sigwe and Oslo.

Donor contributions and relief efforts, combined with the arrival of late rains which improved harvest

prospect and livestock conditions, helped avert a serious crisis. WFP donated \$50,000 to purchase 230 MT of maize which was distributed at the end of April. LWF also contributed 230 MT of maize from its food stocks. Based on a daily ration of 400 grams, the combined USG, WFP, and LWF donations were sufficient to feed two-thirds of the region's population for two months.

TOTAL USG **\$23,152**

ZAIRE - Emergency

Anarchy reigned on Sept. 23, 1991, when soldiers went on a rampage in the capital city of Kinshasa. Soldiers, who had not been paid for two months, shot their weapons into crowds and looted homes, shops, and businesses in Kinshasa, Kikwit, and Kisangani. Mobs joined the rioting and demonstrated against the 26-year misrule of President Mobutu Sese Seko. During the next three days, over 150 people were reportedly killed in the violence, and at least 1,500 were seriously injured or wounded in the capital city. Rioters emptied stores and businesses of all material goods, including food and medicine. Kinshasa, a city of approximately three million people, was cut off from imports from other countries and the rest of Zaire.

On Sept. 26, over 1,000 French and Belgian troops were flown into Kinshasa to aid in the evacuation of foreign nationals, including most of the diplomatic community. Almost 800 Americans were evacuated across the river to Brazzaville, the capital of The Congo. From there, most were flown back to the United States. The Government of France sent approximately 40 tons of emergency food, fuel, and medical supplies. ICRC also provided food and medicine and assisted the Zaire Red Cross in burying the dead and evacuating the injured to local hospitals. MSF/Belgium sent a surgical team to Kinshasa, along with medicine, medical supplies, and supplementary foods. MSF/Belgium was also given funds by the EC and the Government of Canada to purchase supplementary foods and medicine. UNICEF sent drug and medical kits to Brazzaville for later distribution in Kinshasa and the interior.

On Sept. 28, U.S. Ambassador Melissa Wells declared a disaster in Zaire and requested that \$25,000 be given as a grant to a local NGO, the Centre de Developpement

Integral (CDI). CDI used the funds to purchase fuel and cover other costs related to the transport, milling, and distribution of 2,000 MT of corn. This food was trucked from the Equateur Region of Zaire and distributed in Kinshasa through primary health care and nutrition centers serving 50,000 low-income and indigent families. In mid-October (FY 1992), OFDA sent its Africa Regional Advisor, Catherine Farnsworth, to lead an assessment team of USAID/Zaire evacuees and A.I.D. contractors who had been evacuated to Brazzaville. The team made several visits across the river to Kinshasa to examine the conditions and meet with U.S. Embassy officials and international relief personnel. The team proposed a series of options for USG interventions in the areas of health, medicine, food, and nutrition.

TOTAL USG **\$25,000**

(Note: Additional OFDA funds towards the emergency were spent in Zaire in FY 1992. Readers should refer to the FY 1992 Annual Report for further information.)



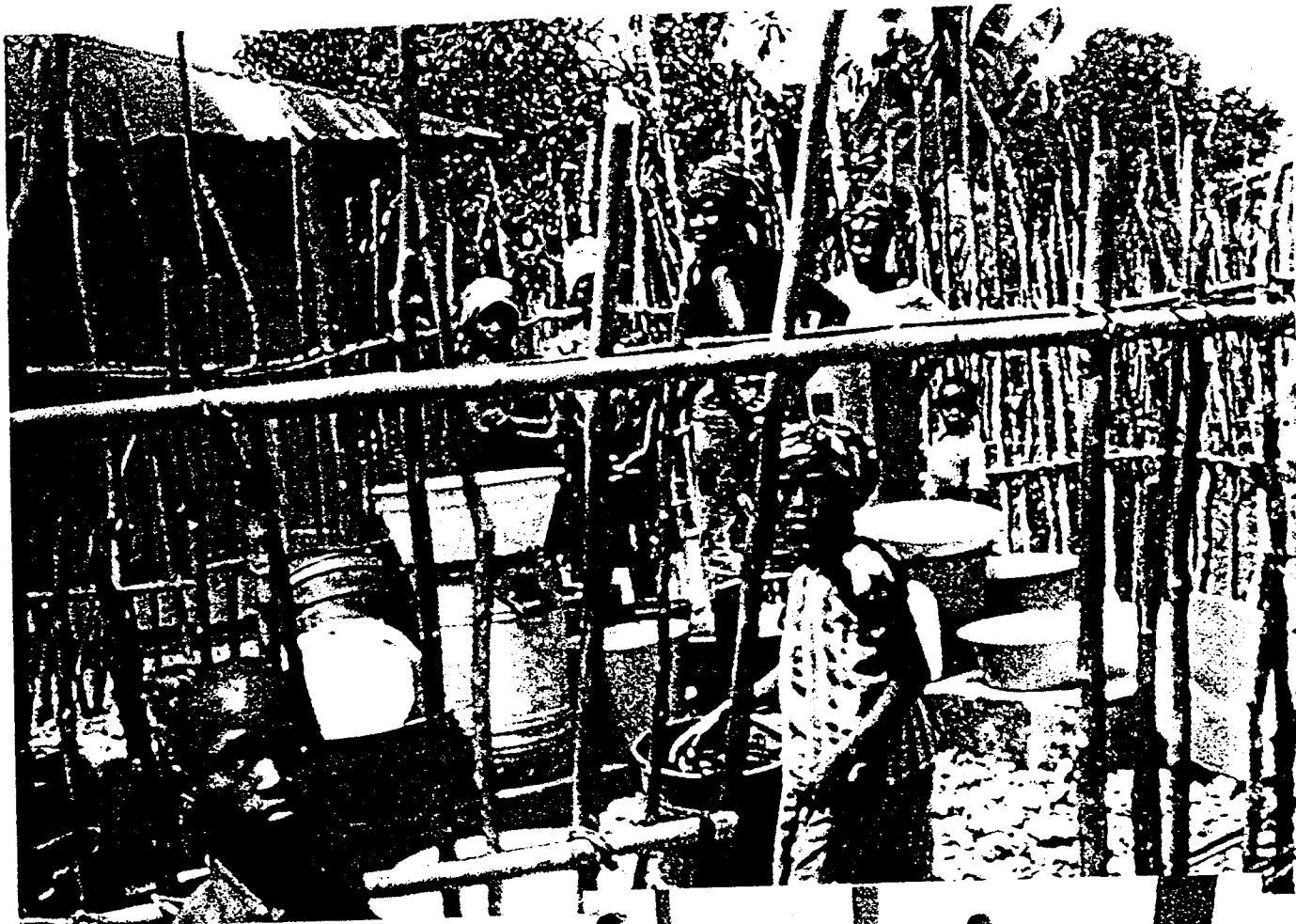
Displaced Sierra Leonean children reach eagerly for food at a camp in Guinea



Sierra Leonean mother holds her child at a displaced persons camp in Guinea
Photos by LeVonne Harrell, AID/EHA/OFDA



OFDA operations officer, LeVonne Harrell, stands before a home destroyed in a rebel attack in Sierra Leone



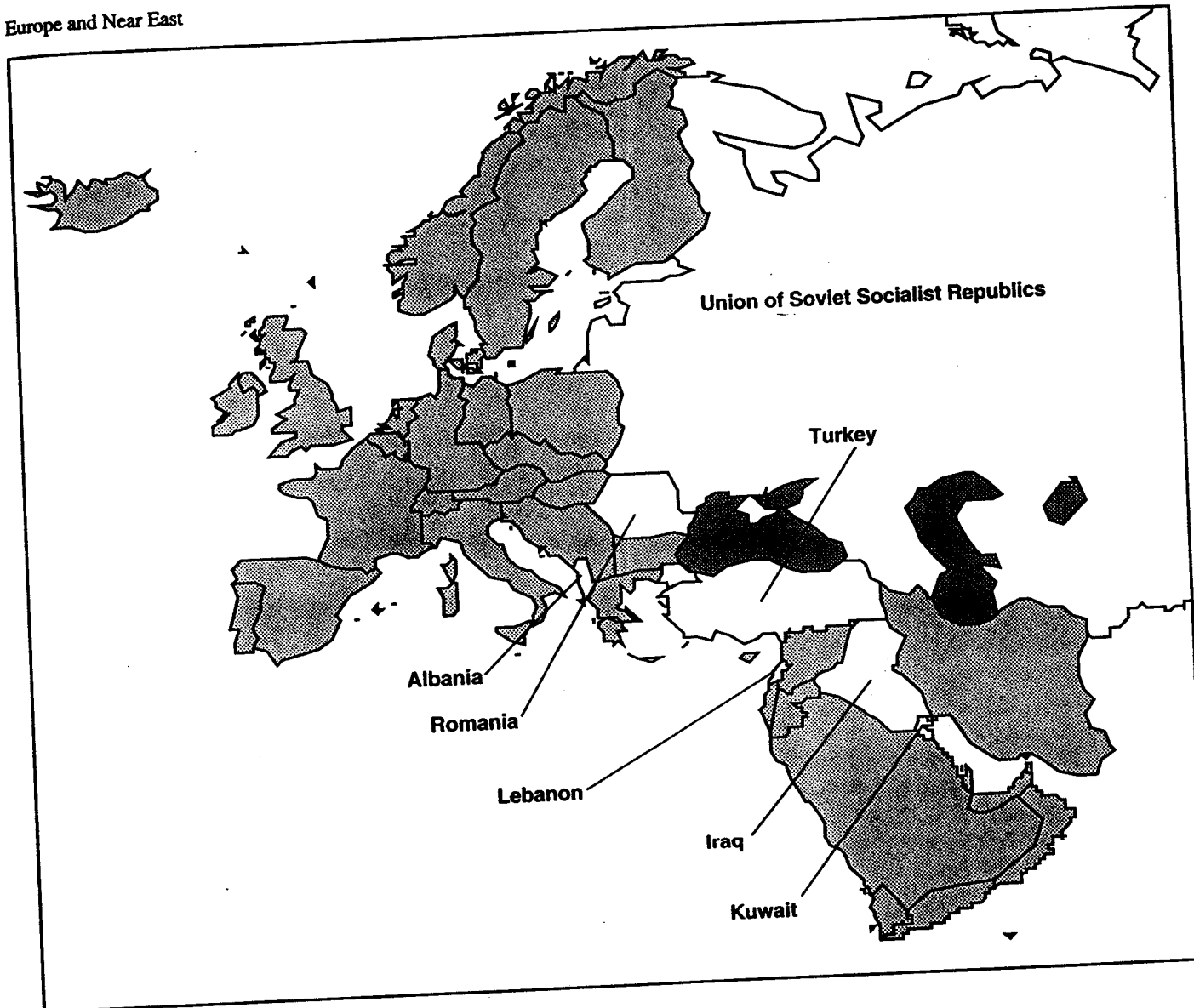
A MSF water pump installation in Sierra Leone.
The project was funded by OFDA



Rice distribution (WFP) in Sierra Leone includes USG-donated food
Photos by Levenne Harrell, AID/FHA/OFDA

Europe and Near East

Europe and Near East



ALBANIA - Emergency

| | |
|------------------------------|--|
| Date: | 1990 - 1991 |
| Location: | Countrywide |
| No. Dead: | A small number killed during demonstrations |
| No. Affected: | 3.2 million (the entire population of the country) |
| Total USG Assistance: | \$2,399,212 |

The Disaster

After 45 years of isolationism and rigid Stalinist policies, the government of Albania eased controls in 1990, in response to widespread civil unrest. The small steps President Alia took were not enough to revive the lagging economy, and popular discontent continued to spread. After Albania's first open elections on March 31 returned the Communist Party to power, protests against the party victory turned into bloody confrontations in Shkoder, a city in northern Albania, and in Tirana. June brought more turmoil as 350,000 workers went on strike for several weeks, paralyzing the country and bringing economic activity to a halt. In mid-year, the Communist-led government fell and was replaced by an interim government which promised to hold multi-party elections in early 1992.

The disintegration of the national economy was exacerbated by three consecutive years of drought which devastated Albania's agricultural sector. Prior to the drought, Albania had produced most of its food supply. In November 1990, according to media reports, the Prime Minister admitted that for the first time Albania had begun to import cereals, sugar, fats, beans, potatoes, and other basic commodities to ensure that there would be enough food in the markets. Crop production in 1991 was reported to be 80% below normal, and in mid-1991 the government estimated that Albania would have a food deficit of more than 110,000 MT. One source reported that in March 1991 a monthly ration for one family in Tirana included four kilograms of sugar, two kilograms each of flour, pasta, rice, and white beans, four kilos of meat, two kilos of cheese, and 2.5 liters of oil, and even these limited amounts were not always available in the state-run stores. USG observers confirmed that there were no vegetables available in

Tirana, and that only families with small children were receiving milk. Ships carrying badly needed food imports were unable to dock for fear of being hijacked by Albanians desperate to escape the country.

The economic and political instability in the country inspired thousands to leave by whatever route they could find. Between mid-1990 and mid-1991, 70,000 Albanians left the country, flooding Yugoslavia, Greece, and Italy, which bore the brunt of the tide of refugees. A small percentage of these people were fleeing political persecution and qualified for refugee status. However, most were economic refugees trying to escape the impoverished Albanian economy, and they would eventually have to return to Albania.

Assistance Provided by the U.S. Government

OFDA Assistance

Citing the effects of the drought, widespread shortages of medical supplies, medicine, and safe water, and increased outbreaks of hepatitis and other diseases, Robert Kimmitt, Acting Secretary of State, declared a disaster in Albania on March 29. On April 2, OFDA sent a team to Albania, including Andrew Natsios, OFDA Director, Richard Hough, food aid coordinator from A.I.D. Washington, Cynthia Vlasich, nurse from the ARC, Dr. Richard Kunkle, specialist in emergency medicine, and Gerald Lipson, press officer from A.I.D. Washington. OFDA contributed \$9,912 from its disaster account for support of the team. The team's mission was to review Albania's medical and food situation, and to determine the need for U.S. humanitarian assistance. The team spent two weeks in Albania and reported the following conclusions:

1. There is a lack of international organizations, NGOs, or government agencies in Albania with the capacity or experience to handle humanitarian assistance. The Albanian Red Cross is the only indigenous humanitarian organization through which relief programs could be implemented, and even its ability to do so is limited.
2. The Albanian medical system is well organized and well staffed. Facilities and equipment are old and in disrepair, however, and supplies of medicines such as insulin are insufficient. In addition, health care workers rely on faulty sterilization procedures and reuse

disposable items. These problems affect the vulnerable sectors of the population most deeply: the elderly, handicapped, women, children, and urban poor.

3. Albania's ability to feed itself has declined due to the breakdown of distribution networks, declining farmer productivity, and drought. The government is unable to import essential inputs, or to provide a basic food ration to its citizens. While implementing the systemic changes necessary to address this crisis, the new government will have to pay special attention to the vulnerable populations listed above, to ensure that they do not fall by the wayside.

The team recommended that humanitarian assistance be provided through the Albanian Red Cross, PVOs/NGOs, and, more specifically, that technical assistance should be provided to the Albanian Red Cross to strengthen its capacity; the donor community should donate disposable syringes, needles, essential medicine, and medical equipment; modest amounts of supplementary foods and milk protein should be supplied to malnourished children, and pulses and cereals should be supplied through a carefully targeted general feeding to poor households; and the U.S. and European private sectors should consider working with Albanian officials to explore building factories to produce disposable medical supplies.

Following the team's recommendations, OFDA made a grant of \$250,000 to the ARC to provide operational support to the Albanian Red Cross, and to send an ARC delegate to Tirana to assist with relief distribution.

FFP Assistance

FFP donated 475.9 MT of P.L.-480 Title II emergency food to the Government of Albania at a total cost of \$439,300. This food was to be distributed to poor rural and urban families, in cooperation with the ARC.

Other USG Assistance

DOD flew 60 pallets (roughly 163 MT) of Meals Ready to Eat and bulk rations to Albania in FY 1991. The cost of the commodities and the airlift came to approximately \$1,700,000. DOD also provided excess medical supplies remaining from the Gulf War.

| | |
|------------------|-------------|
| Total OFDA | \$259,912 |
| Total FFP..... | \$439,300 |
| Total DOD | \$1,700,000 |

| | |
|--------------|--------------------|
| TOTAL | \$2,399,212 |
|--------------|--------------------|

Assistance Provided by the International Community

International Organizations

EC - pledged medical supplies worth \$1,800,000 to be distributed by Medecins Sans Frontieres (an NGO), and food aid valued at \$1,200,000 to be distributed by LRCS and various NGOS. At the end of FY 1991, the EC also agreed to provide \$6,100,000 worth of Hungarian wheat for Albania.

LRCS - purchased vehicles and communications equipment to support the Albanian Red Cross, and sent two delegates to help with relief programs. Individual Red Cross Societies contributed as follows:

- Japan - \$80,000
- Germany - 3,000 MT of cereals
- Finland - 150 MT of oil and 150 MT of beans
- Italy - one vehicle and other relief items
- Greece - shoes and other relief supplies

UNHCR - participated in a U.N. assessment team, and sent a delegate to Albania to work on repatriation of minors and others.

UNICEF - sent assessment teams to examine health conditions for women and children.

WHO - sent a medical assessment team, and appealed for \$3,000,000 in assistance for the medical and health sectors.

Governments

Austria - pledged \$678,000 worth of emergency assistance, including food aid valued at \$593,000.

Finland - pledged food aid valued at \$244,000.

France - pledged \$783,000 worth of food and medicine.

Germany - donated 100,000 MT of wheat and wheat flour.

Greece - donated five shipments of basic foods, (e.g., milk, sugar, and oil) sufficient to feed 10,000.

Italy - provided 255 billion lire (approximately \$196 million) including 100 billion lire for emergency food aid, 30 billion lire in credits for industrial inputs, 5 billion lire for the educational system, and 20 billion lire for food from Italian agricultural intervention stocks.

Norway - donated 18 tons of powdered milk and high protein biscuits valued at \$38,000.

IRAQ - Displaced Persons

Date: 04/01/88

Location: Refugees fled from the cities of Basra, Amman, and surrounding villages in northern Iraq into Turkey. Refugees fled from the cities of Basra, Amman, and surrounding villages in northern Iraq into Turkey. Refugees fled from the cities of Basra, Amman, and surrounding villages in northern Iraq into Turkey.

No. Dead: CDC estimated that approximately 6,700 people, mostly children under five, died between March 29 and May 25 in Turkey and northern Iraq. This figure is an extrapolation based on an affected population of 400,000 in the mountain camps and death rates calculated at various intervals. No reliable estimate is available for the death toll of Iraqi refugees in Iran, although it is believed to be in "the thousands".

No. Affected: It is estimated that between 400,000 and 500,000 Iraqis, mostly Kurds, were displaced on both sides of the Iraq-Turkey border. Approximately 1 million Iraqis moved across into northern Iran. In the southeastern section of the country, an estimated 71,000 Iraqi Shiites fled into southern Iran and an additional 30,000 sought refuge in territory occupied by Coalition forces.

Total USG Assistance: \$582,954,344

The Disaster

On March 3, military commanders representing the Coalition forces and the Iraqi Government signed an official cessation of hostilities agreement, effectively ending the Gulf War. Following the establishment of the ceasefire, Iraqi Kurds in the north and Iraqi Shiites in the south rebelled against the Iraqi Government military forces still in control of these regions. Both groups were temporarily successful against the Iraqi military, but Iraqi leader Saddam Hussein quickly re-deployed his Republican Army ground forces and helicopter gunships to quash the uprisings. Fearing reprisals by Saddam Hussein, hundreds of thousands of Kurds in northern Iraq fled in terror into Turkey and Iran during the final

week of March. The memory of Saddam Hussein's use of chemical weapons against the Kurds in 1988 was still fresh in the minds of these refugees. In some cases, the entire population of a town or village picked up whatever they could hand-carry and retreated into the inhospitable mountainous regions along the Turkish border. By the second week of April, an estimated 400,000 refugees from northwestern Iraq had reached the Turkish border. The majority of the refugees did not bring along food and water, or proper clothing to protect them from the below freezing temperatures. Death rates climbed, especially among children under five, who were particularly susceptible to exposure, malnutrition, and infectious diseases.

From northeastern Iraq, an estimated one million Iraqis moved across the border into northern Iran. They joined approximately 100,000 refugees who had arrived in 1988 following the Iraqi chemical attack that killed thousands of Kurds in the region of Halapja. Thousands of cars and trucks streamed into northwestern Iran, causing massive traffic jams along the border. The refugees settled around existing camps just across the border in the Iranian provinces of Western Azerbaijan, Kurdistan, and Bakhtaran. The Government of Iran and the Iranian Red Crescent quickly established tent encampments for these refugees.

Meanwhile, in the southeastern corner of Iraq, approximately 30,000 Iraqis sought sanctuary in the security zone occupied by Coalition forces along the border with Kuwait. Following the suppression of the Shiite uprising by the Iraqi military forces, an additional 71,000 Iraqi Shiites fled into southern Iran, while thousands more were displaced in the marsh areas just north of Basra.

Relief Efforts

Northern Iraq/Turkey

During the final week of March and the first week of April, hundreds of thousands of Iraqi refugees streamed into the mountains along the Turkish border. The Turkish Government originally prevented the refugees from entering Turkey, but soon the military, private citizens, and the Turkish Red Crescent Society began delivering food and supplies to the border. Truck convoys were met by mobs of refugees scrambling for

supplies without any organized distribution. On April 5, President Bush announced that U.S. military aircraft stationed at Incirlik Air Base would begin airdrops of supplies to refugees in the mountains of Turkey. On the following day, U.S. military cargo planes, along with French and British aircraft, began airdropping supplies to areas accessible to the refugees. These supplies, which had been pre-positioned in Turkey for use in Operation Desert Storm and included pre-packaged meals known as Meals Ready to Eat (MREs), tents, blankets, sleeping bags, and containers of water, were attached to pallets and dropped by parachute. Later, supplies were delivered by helicopter. On April 8, Secretary of State James Baker visited one refugee site to witness firsthand the misery and humanitarian relief efforts. The Coalition's humanitarian effort was dubbed *Operation Provide Comfort*. On April 10, the Government of Turkey (GOT) approved the additional deployment of Coalition forces to aid the operation. The GOT also approved the establishment of a forward operations base at Silopi, near the Iraq border. Heavy rains and uncontrolled mobs of refugees continued to make delivery and distribution of relief supplies difficult. U.S. military personnel were deployed to several sites to establish organized receipt and distribution of relief commodities.

On April 11, OFDA dispatched a DART, led by OFDA Deputy Director Dayton Maxwell, to provide technical assistance to the U.S. military commanders managing *Operation Provide Comfort*. The DART included emergency relief consultants, and specialists in the fields of shelter, water and sanitation, logistics, and emergency health. One team member was stationed in Stuttgart, Germany, to serve as a liaison with the U.S. European Command, which was coordinating *Operation Provide Comfort*. Another team member was stationed in Ankara, Turkey, to act as liaison with the U.S. Embassy and the World Food Programme. The rest of the team members were deployed to Incirlik Air Force Base and the forward operations base at Silopi. Several team members, including epidemiologists from CDC and environmental health specialists from the Water and Sanitation for Health (WASH) Project, began making assessments in several refugee sites. Liaison Teams from the U.S. Embassy in Ankara were also deployed to several refugee sites. U.S. military medical personnel and Civil Affairs teams were already on the scene distributing supplies and providing medical assistance.

Spontaneous refugee sites began springing up in the mountains along the Turkey/Iraq border. The GOT moved many of the refugees into designated campsites. By April 16, the most populous camps were Cukurca (estimated 80,000 in camp, 200,000 in the region), Isikveren (approximately 100,000), Yakmal (around 40,000), and Umzumlu (around 50,000). During the first two weeks of April, DART members from the CDC estimated that the mortality rate for the general refugee population was 3.3 per day per 10,000 people, while the mortality rate for children under five was 10.8 per day per 10,000. As refugees crowded into camps and were exposed to infectious diseases, however, the daily mortality rates climbed to 5.7 deaths per 10,000 for the general population, and as high as 20.5 deaths per 10,000 for children under five.

It quickly became evident that mortality rates would continue to climb as long as the refugees remained in the mountain camps, where there was little shelter and distribution of food, water, and other supplies was difficult. In an effort to move refugees down from the mountains, *Operation Provide Comfort* and the Turkish Red Crescent began sending in truckloads of bulk food, water, blankets, and tents to camps in lowland areas. The U.S. and French military, along with International Organization for Migration, provided trucks and buses to move some Iraqi refugees from the mountain sites to a pilgrimage way station at the El Hadj facility near Silopi, where medical facilities and tents were erected. Several international organizations, such as UNICEF, UNHCR, and LRCS, also began sending personnel and relief supplies, and issued emergency appeals for international assistance.

On April 16, President Bush announced the decision to establish a security zone inside northern Iraq to encourage displaced Iraqis to return to their homes. On April 18, U.N. Executive Delegate Prince Sadruddin Aga Khan signed an agreement with the Government of Iraq permitting the United Nations to work in Iraqi territory to provide humanitarian assistance to returning Iraqi displaced persons. Some Kurdish refugees resisted attempts at relocation, fearing they would be forcibly returned to Iraq without protection or security guarantees. Coalition Forces quickly established a militarily protected security zone in the northernmost tip of Iraq and conducted air patrols above the 36th Parallel. DART members led *Operation Provide*

Comfort Civil Affairs personnel in planning the creation of relocation camps around the town of Zakhu, 10 km. inside of Iraq. Kurdish clan leaders were brought to Zakhu to inspect the area and security arrangements. Later Kurdish men volunteered to assist in the construction of tent communities with health, water, and sanitation facilities. Way station camps were also set up along the route from the mountain sites to the relocation camps in order to provide essential supplies and medical care to returning refugees.

As temperatures moderated in the mountainous areas, medical relief workers feared increased outbreaks of infectious diseases in the unsanitary refugee sites. Diarrheal disease claimed the lives of thousands of refugees, mostly children. On April 19, OFDA donated \$40,000 to UNICEF to purchase 500,000 packets of Oral Rehydration Salts (ORS), an easy-to-prepare solution for the treatment of diarrheal disease. The ORS supplies were flown from Copenhagen to Turkey and distributed by medical relief workers in the refugee camps. OFDA also donated \$13,000 to UNICEF for 100,000 doses of measles vaccines and \$13,500 for syringes, needles, and cold chain boxes. Doctors from CDC, UNICEF, and the U.S. military began administering measles vaccinations to refugees on May 2. By May 9, daily death rates in the mountain camps declined to 2.2 per 10,000 for the general population, and 8.7 per 10,000 for children under five.

As of May 10, 20,000 Iraqi returnees had moved into the camp at Zakhu, and thousands more had begun the trek down from the mountains. DART and Civil Affairs personnel oversaw the construction and management of the camp, while WFP handled the distribution of food to the returning refugees. Soon, several NGOs, such as MSF, IRC, Action Nord Sud, Global Partners, and CARE, began setting up operations in Zakhu. Two more camps were constructed to house over 50,000 Iraqi returnees. On May 13, it was announced that the United Nations would take over administration of the first camp at Zakhu. Representatives of the United Nations, Coalition Forces, U.S. State Department, NGOs, and several DART members met on May 25 in Diyarbakir, Turkey, to discuss the transition to U.N. management of the humanitarian assistance programs in northern Iraq.

Coalition Forces extended the security zone to include the towns of Sirsinek and Suriya. However, most of the

Iraqi refugees who had fled into Turkey were from Dahuk, a city of 325,000 residents prior to the exodus. Dahuk was located outside the security-zone and was still under the control of Iraqi military and secret police. On May 25, a contingent of Coalition military forces, Civil Affairs units, DART members, and international relief workers entered Dahuk to repair housing and essential services, and create a conducive environment for the return of its residents. Once Iraqi soldiers and secret police retreated from the area, refugees began returning to Dahuk in droves.

By June 6, only 10,000 residual Iraqi refugees remained at the camps at Silopi and Semdinli in Turkey while more than 30,000 returnees remained at the transit camps at Zakhu. Most of the other displaced Iraqis returned to their homes in Dahuk or villages further south. In late June, Coalition forces began withdrawing from northern Iraq. By July 15, all Coalition ground forces had withdrawn across the border. However, Coalition aircraft continued reconnaissance flights above the 36th Parallel in order to deter against possible Iraqi military actions against the Kurds.

With the departure of *Operation Provide Comfort* and DART personnel, the management of all humanitarian relief operations was turned over to the United Nations. UNHCR was named the lead U.N. agency in northern Iraq. In all, approximately 15 NGOs and other international organizations continued to provide humanitarian assistance in northwestern Iraq under the U.N. aegis. WFP and CARE distributed most of the food to Iraqi returnees in northwestern Iraq. Under an agreement with the Government of Iraq, the United Nations arranged visas for relief workers in northern Iraq. Lightly-armed U.N. Guard Forces were sent to Dahuk to monitor security. *Operation Provide Comfort* had accomplished its two primary objectives: to reduce mortality rates among the refugee population and to create conditions so that refugees could return to their homes quickly and safely.

Northern Iraq/Iran

It is estimated that approximately one million Iraqis moved from towns in the northeastern region of Iraq into northwestern Iran. Unlike the refugees who escaped by foot into Turkey, many Iraqis who fled into Iran packed vehicles with belongings and drove across the border. Once across the border, these newly arrived

Iraqis congregated around already established refugee camps that had been built following the last Kurdish exodus in 1988. The Government of the Islamic Republic of Iran and the Iranian Red Crescent quickly mobilized relief workers to expand services in these refugee camps. With Coalition Forces providing assistance to refugees in Turkey, many international organizations and donors focussed their aid on the Iraqi refugees in Iran. For example, UNHCR and ICRC set up several new camps to accommodate the influx of refugees. MSF/France and IOM also set up operations in Iran, while many European donor governments sent plane loads of relief supplies for the refugees. Approximately 70% of the European Community's total assistance was channeled to Iran. On April 27, the USG dispatched a plane carrying privately donated blankets to Teheran, where they were handed over to the Iranian Red Crescent for distribution to the refugees.

No final official estimate was ever made on the number of Iraqi refugees who died in Iran, although it is believed to be less than the mortality figures in Turkey where the conditions were much harsher. Typhoid fever was reported in several refugee camps in northern Iran. At the height of the influx, it was reported that 360,000 refugees had moved into West Azerbaijan Province, 190,000 into Kurdistan province and 450,000 into Bakhtaran Province. In early May, however, tens of thousands of refugees began returning to Iraq after Kurdish rebels re-established their presence in parts of the northeastern territory. Meanwhile, negotiations were taking place in Baghdad between the Iraqi Government and Kurdish leaders over future autonomy for the region of northern Iraq populated predominately by Kurds. IOM began organizing truck convoys to transport refugees back to cities and transit camps in Iraq. By the end of July, fewer than 100,000 refugees remained in northern Iran. UNHCR began constructing winterized shelters for refugees who did not wish to return to Iraq, and would stay throughout the winter.

Southern Iraq/Iran

While the refugees in the north primarily belonged to the Kurdish ethnic group, Iraqis who fled from the south were mostly Islamic Shia. Immediately following the cessation of war between Iraq and the Coalition Forces, Iraqi Shiites around the city of Basra rebelled, but were quickly suppressed by the Iraqi Republican Army. Approximately 30,000 Iraqis sought refuge in the

security zone maintained by Coalition Forces next to the Kuwaiti border. Coalition Forces constructed facilities for these refugees at Safwan, based on plans provided by OFDA-funded consultants from INTERTECT (see "Kuwait - Emergency"). The ICRC provided potable water and medical care to combat an outbreak of diarrheal disease. Once Coalition Forces began withdrawing, the United Nations sent in a peace-keeping force, known as the U.N. Iraq Kuwait Observation Mission (UNIKOM), to maintain security. By late April, approximately 20,000 displaced Iraqi civilians were relocated to a camp at Rafha just inside Saudi Arabia.

Approximately 71,000 Iraqi Shiites moved into the provinces of Khuzestan and Ilam in southwestern Iran. However, at least 40,000 more were stranded in a marshy area just north of the Iraqi city of Basra. Iraqi military units fired artillery into the marshes to prevent these civilians from escaping. In June, the U.N. Executive Delegate, Sadruddin Aga Khan, protested the Iraqi military actions and led a U.N. interagency mission to inspect the area. On July 11, the United Nations opened a relief center in the area to distribute food and supplies to the displaced persons who had been living in the marshes. The center was later closed by the Government of Iraq.

Assistance Provided by the U.S. Government

On March 27, the U.S. State Department issued a disaster declaration for Iraq and authorized OFDA to provide emergency assistance to displaced persons leaving Iraq. This was followed by a disaster declaration on April 5 by the U.S. Ambassador to Turkey, Morton Abramowitz, authorizing relief assistance to Iraqi refugees in Turkey.

OFDA Assistance

Grants to International Organizations

The first action by OFDA was to allocate \$1 million from the International Disaster Assistance Account to UNICEF and ICRC to address emergency health needs of vulnerable Iraqis. A total of \$869,000 was given to UNICEF for its program in Iraq to immunize 500,000 children. An additional \$131,000 was allocated to ICRC for its ongoing relief programs in Iraq.

On April 11, OFDA dispatched a DART, led by OFDA Deputy Director Dayton Maxwell, to Turkey to assist in the coordination of *Operation Provide Comfort* and to perform emergency needs assessments. DART members included operation officers, logisticians, and information specialists from OFDA; press officers, procurement specialists, and liaison officers from other A.I.D. offices; and outside specialists in the areas of communications, shelter, water and sanitation, health, and food aid. The CDC provided emergency health and epidemiology specialists to join the DART. Experts from WASH conducted site assessments and developed water and sanitation plans for the transit camps. OFDA also contracted the private consulting firm, INTERTECT, to provide consultants with experience in emergency relief planning, shelter, and refugee issues, under the direction of veteran disaster consultant, Frederick Cuny. As *Operation Provide Comfort* moved into northern Iraq, the DART's most important role was to devise a humanitarian response plan, in conjunction with the U.S. military, for the repatriation of Kurdish refugees back to their homes. The DART also assisted in the development and implementation of a transition plan for transferring management of relief and rehabilitation activities to the United Nations and the NGOs. More than 30 people participated in the DART on a rotational basis and members were stationed at Stuttgart, Germany; Ankara, Incirlik Air Force Base, Silopi in Turkey; and Zaku and Dahuk in northern Iraq.

To add to relief supplies being airdropped by *Operation Provide Comfort*, OFDA provided \$250,000 to USAID/Ankara to purchase blankets, clothing, water, and baby food. In addition, OFDA provided \$60,000 to DOD for the local procurement of additional relief supplies for *Operation Provide Comfort*. OFDA's DART spent its own funds to purchase bulk food commodities, water, and other supplies for the refugees. Funds were also used to pay for the construction of water and sanitation facilities as well as to buy cooking supplies, lighting equipment, tarpaulins, and fences for the returnee transit camps at Zakhu. Contract officers from USAID/Cairo were detailed to the DART to administer funds used for local procurement and contracting services.

In addition to relief supplies procured locally, OFDA provided over 2,340 tents from its stockpiles in Maryland, Panama, and Guam for the construction of camps for Iraqi displaced persons. OFDA also provided 115,690 blankets and 1,500 rolls of plastic sheeting from its various stockpiles. The tents were not replaced in the stockpile and were considered an in-kind contribution (\$439,385).

On April 19, OFDA donated \$40,000 to UNICEF to purchase 500,000 packets of ORS from the UNIPAC medical supply warehouse in Copenhagen. OFDA also purchased 100,000 doses of measles vaccines and syringes, needles, and cold chain boxes from UNIPAC. Doctors from CDC, UNICEF, and the U.S. military distributed the ORS packets and administered measles vaccinations in most of the refugee camps.

On May 10, OFDA gave grants to two PVOs working in northern Iraq. CARE was given a grant to support its emergency food distribution program in northern Iraq, while IRC was given funds to implement a shelter, health, and sanitation project in northern Iraq. Both of these PVO programs were subsumed under the U.N. aegis following the establishment of a U.N. humanitarian relief program in Iraq in mid-June. In July, OFDA provided funds to CRS to support its nationwide feeding and health program for Iraqi children affected by food and medical supply shortages inside Iraq.

FFP reallocated approximately 17,000 MT of food from its FY 1990 food reserve program with Jordan for feeding programs for refugees leaving Iraq. Most of this food was distributed by WFP and CARE to refugees from northern Iraq. In addition, FFP provided 47,757 MT of rice, vegoil, wheat flour, and soya blend in FY 1991 to WFP's International Emergency Food Reserve (IEFR). This food was also distributed to Iraqi refugees and displaced persons by WFP, ICRC, and various NGOs.

RP provides grants to international relief organizations in response to appeals for refugee emergencies. In April, the United Nations issued a consolidated appeal for over

\$400 million, combining previous appeals from U.N. agencies such as UNHCR, UNICEF, and WFP. A pledging conference chaired by U.N. Secretary General Perez de Cuellar was held in Geneva on June 12, and attended by over 200 representatives from donor governments, international organizations, and non-governmental organizations. In FY 1991, RP provided over \$46.5 million in response to the U.N. appeal. These funds went to U.N. agencies providing assistance to Iraqi refugees in Turkey and Iran, as well as returnees to Iraq.

In addition, RP provided \$6,000,000 to the U.N. Relief and Works Administration for relief assistance and associated costs for several hundred thousand Palestinians affected and displaced due to Iraq's occupation of Kuwait and subsequent events. RP also contributed \$12,900,000 to ICRC and \$250,000 to LRCS for its relief program at the Abdali displaced persons camp in Kuwait. Lastly, RP contributed \$1,880,000 to the Turkish Red Crescent and other relief organizations that provided assistance to Iraqi refugees in Turkey.

DOD Assistance

Operation Provide Comfort began on April 6 and by mid-May had delivered over 16,600 tons of relief supplies to Iraqi refugees. Of this amount, more than 12,000 tons were delivered by military aircraft. The remainder was delivered by ground transportation. These relief supplies included bulk food, pre-packaged meals (MREs), water, blankets, tents, plastic sheeting, and clothing. *Operation Provide Comfort* included the participation of military contingents from the United States, the United Kingdom, France, Germany, Netherlands, and Italy. Over 12,200 U.S. military personnel participated in the operation in Turkey and later northern Iraq. DOD's Office of Global Affairs estimated costs incurred by *Operation Provide Comfort* to be at least \$449 million.

In addition, DOD donated an estimated \$15.1 million of excess property (food, tents, etc.) to UNHCR for its humanitarian assistance programs in Iraq, and an additional \$1 million of excess property to the U.N. Guard Force.

Summary of USG Assistance

OFDA Assistance

| | |
|---|-------------|
| Grant to UNICEF..... | \$869,000 |
| Grant to ICRC..... | \$131,000 |
| Grant to CRS..... | \$4,544,411 |
| Grant to IRC..... | \$1,336,174 |
| Grant to CARE..... | \$984,819 |
| USAID/Ankara Allotment for Local Purchase . | \$250,000 |
| DART Local Purchase | \$3,328,390 |
| DOD Local Purchase | \$60,000 |
| TDY of RP officer to Turkey..... | \$6,290 |
| DART Personnel | \$111,657 |
| Team Support (supplies and radio equipment)... | \$57,012 |
| INTERTECT Contract | \$258,457 |
| CDC Personnel..... | \$34,869 |
| Purchase of ORS from UNICEF/UNIPAC | \$40,000 |
| Purchase of immunization equipment | \$13,500 |
| Purchase of measles vaccine | \$13,000 |
| Replacement costs of 96,640 blankets | \$418,670 |
| Replacement costs of 1,500 rolls of plastic sheeting..... | \$434,700 |
| Value of tents and repair kits | \$439,385 |

FFP Assistance

| | |
|--|--------------|
| 17,000 MT of diverted food (FY 1990)..... | \$8,980,000 |
| 47,757 MT of Title II food (FY 1991) | \$12,384,100 |
| Ocean freight and transport (FY 1991)..... | \$15,608,900 |

RP Assistance

Grants to UNHCR..... \$28,870,000

Grant to UNICEF..... \$3,000,000

Grant to WHO..... \$500,000

Grant to WFP..... \$3,000,000

Grant to IOM..... \$3,750,000

Grant for the U.N. Guard Force..... \$6,500,000

Grant to U.N. Office of the Executive
Delegate..... \$900,000

Grant to UNRWA..... \$6,000,000

Grant to ICRC..... \$12,900,000

Grant to LRCS..... \$250,000

Grants to Turkish Red Crescent and other Turkish
organizations..... \$1,880,000

DOD Assistance

Operation Provide Comfort (estimated
incurred costs)..... \$449,000,000

Value of Excess Property donated to
UNHCR..... \$15,100,000

Value of Excess Property donated to U.N.
Guard Force..... \$1,000,000

Total OFDA..... \$13,331,334

Total FFP..... \$36,973,000

Total RP..... \$67,550,000

Total DOD..... \$465,100,000

TOTAL \$582,954,334

Assistance Provided by U.S. Voluntary Agencies

ADRA - sent a team to distribute clothing, blankets,
medicines, and provided water and health assistance to
Iraqi refugees in Turkey.

American Friends Service Committee - donated clothing
and personal hygiene kits for refugees in Turkey.

ARC - dispatched an assessment team, three logisticians,
and a physician to assist in relief efforts in Turkey.
ARC also donated blankets and WHO health kits.

American Refugee Committee - sent medicine, medical
supplies, and medical personnel to Turkey.

Americares - sent a medical team to work in north-
western Iran, but was forced to pull out on May 3.

CARE - managed food distribution and a commodity
management program in northern Iraq.

CRS - managed a nationwide feeding and maternal child
health program in Iraq.

CWS - sent clothing and blankets for refugees in
Turkey.

Direct Relief International - sent two shipments of
medical supplies consigned to the Kurdish Relief
Association and the Iranian Red Crescent.

FHI - shipped baby food, medical supplies, blankets,
and seeds to MSF and the Turkish Red Crescent.

International Medical Corps - sent public health and
trauma specialists to Turkey.

IRC - sent teams to Turkish refugee camps, and later
managed a health, sanitation, and shelter program in
northern Iraq.

LWR - donated blankets for refugees in Turkey.

MAP International - provided medicine through Food
for the Hungry.

MCI - shipped children blankets to Turkey.

Northwest Medical Team - sent trauma specialists,
physicians, and nurses and set up medical logistics
system in northern Iraq.

Operation USA - sent ORS packets and therapeutic
vitamins for refugees in Turkey.

Project Concern International - sent medical supplies and personnel to Turkey in association with American Refugee Committee.

SCF/US - sent relief teams to provide public health, water, and sanitation assistance in Turkey.

World Relief - sent a survey team, and a team of health specialists and logisticians to Turkey.

WVRD - sent a team to Turkey to distribute blankets, clothing, food, and medicine purchased locally.

Assistance Provided by the International Community

International and Intergovernmental Organizations
UNDRO released regular financial reports on commitments to the consolidated U.N. appeal. Reported contributions to U.N. agencies were taken from UNDRO Financial Report F13 dated Jan. 3, 1992.

EC - reported that it would provide \$180,000,000 in humanitarian assistance to the region, most of it for Iraqi refugees in Iran. Most European donor governments channeled a portion of their contributions through the EC.

FAO - oversaw short-term emergency material assistance program in Iraq. Total contributions reported at \$1,371,319.

ICRC - set up and operated refugee camps in Iran; managed food distribution programs in northern Iraq; and implemented water and sanitation projects throughout Iraq, POW exchange programs in Iraq and Saudi Arabia, and detainee protection programs in Kuwait.

IOM - managed repatriation programs for Iraqi returnees. Total contributions reported at \$11,290,775.

LRCS - supported the work of the ICRC, Turkish Red Crescent, and Iranian Red Crescent.

U.N. Office of the Executive Delegate - coordinated the U.N.'s Regional Humanitarian Plan of Action. Prince

Sadrudin Aga Khan was named the U.N. Executive Delegate. Total contributions valued at \$3,560,010.

U.N. Guard Force - sent over 400 lightly armed U.N. Guards to protect U.N. personnel, assets, and NGO operations linked with the U.N. humanitarian program. Total contributions reported at \$49,822,371.

UNHCR - served as the lead U.N. agency, and maintained approximately 400 international and local staff in Iraq, Iran, and Turkey, 11 field offices, and 35 relief supply warehouses. Total contributions reported at \$152,991,857.

UNICEF - was responsible for emergency maternal-child care, water and sanitation programs, immunization campaigns, and other health-related programs. Total contributions reported at \$42,245,010.

U.N. Volunteers - provided staff for U.N. operations. Total contribution reported at \$1,793,346.

WFP - managed the U.N.'s food distribution program for refugees and returnees in Iraq. Total contribution reported at \$55,646,171.

WHO - provided technical assistance for the design of public health services, epidemiological surveillance, and environmental health assistance in Kuwait. Total contribution reported at \$1,365,000.

Governments

The following is a partial list of government donations reported to OFDA as of June 6, 1991. To avoid double-counting, government contributions to the U.N. appeal have been excluded.

Australia - contributed \$704,000 to ICRC, \$200,000 to Australian NGOs, and \$93,600 in relief supplies.

Austria - donated \$1,100,000 to ICRC.

Belgium - contributed \$2,890,173 to the ICRC, and more than \$5,000,000 to the Belgium Red Cross, Oxfam, and MSF.

Canada - donated \$3,600,000 to ICRC, \$1,760,000 through the Canadian Red Cross, and \$1,300,000 to LRCS.

Czechoslovakia - provided \$500,000 for in-kind relief supplies.

Denmark - contributed over \$4,000,000 to the Danish Red Cross, Danish ChurchAid, and Save the Children/Denmark.

Finland - donated \$500,000 to ICRC.

France - participated in *Operation Provide Comfort* airdrops, donated over \$180,000 to MSF and reported \$22,500,000 for in-kind contributions to Iraqi displaced persons in Iran, Turkey, and Iraq.

Germany - participated in *Operation Provide Comfort* airdrops and provided over \$100,000,000 to the German Red Cross, ICRC, and other NGOs.

Greece - donated \$54,000 for in-kind assistance to Iraqi refugees in Iran.

Hungary - gave \$20,000 to the Hungarian Red Cross and \$60,000 for in-kind contributions.

Indonesia - provided \$125,000 for in-kind assistance through the Indonesian Red Cross/Red Crescent.

Ireland - donated \$41,000 to ICRC, \$320,000 to the Irish Red Cross, and \$160,000 to Irish CONCERN.

Italy - gave \$1,600,000 to ICRC, and \$400,000 in medical supplies through the Italian Red Cross.

Japan - reported \$390,000 for in-kind assistance to Iran, \$304,000 for in-kind assistance to Turkey, and \$3,000,000 to ICRC.

Korea, Rep. - gave \$300,000 to ICRC.

Luxembourg - reported \$1,500,000 in assistance for Iraqi refugees.

Malaysia - donated \$100,000 through the Malaysian Red Crescent.

Netherlands - participated in relief operations in Turkey and northern Iraq, and provided \$1,400,000 to MSF, and \$1,850,000 to the Dutch Red Cross.

Norway - donated over \$1,000,000 to ICRC, and \$18,000,000 to various relief organizations.

Pakistan - contributed \$780,000 for in-kind assistance to refugees in Iran.

Poland - donated \$210,000 through the Polish Red Cross, and \$52,500 for in-kind contributions.

Spain - reported \$30,000,000 for in-kind assistance for refugees in Iran and Turkey.

Sweden - donated \$1,700,000 to ICRC.

Switzerland - contributed \$3,500,000 to ICRC.

Turkey - reported spending at least \$200,000,000 in assistance for Iraqi refugees.

United Kingdom - participated in *Operation Provide Comfort* airdrops and relief operations in northern Iraq, dubbed *Operation Safe Haven*. The U.K.'s Overseas Development Administration sent medical personnel, engineers, and relief workers to provide humanitarian assistance in northern Iraq. Reported providing at least \$65,000,000 in cash donations, \$10,714,286 to SCF/UK to support the Iranian Red Crescent, and \$5,500,000 to ICRC.

Yugoslavia - reported \$330,000 for in-kind assistance.

Non-Governmental Organizations

Action Nord Sud - provided medical personnel in Turkey and northern Iraq.

AICF (Action International Contre la Faim) - sent medical teams to Turkey and northern Iraq.

AIM (Architects and Engineers of the World) - constructed clinics and schools in northern Iraq.

Christian Outreach - sent public and primary health specialists to work in Turkey and northern Iraq.

Danish Refugee Council - managed water projects in Iraq in association with UNHCR.

Danish Church Aid - implemented water and shelter programs for Iraqi returnees in association with UNHCR.

Equilibre - sent medical personnel, food, medical supplies, clothes, and baby food to refugee camps in Turkey.

Global Partners - sent a team of doctors and logistic coordinators to Turkey and northern Iraq.

Medecins du Monde - sent medical personnel to Turkey and northern Iraq.

MSF/Belgium/France/Netherlands - sent several medical teams to Turkey, Iran, and Iraq. MSF also managed several health, water, and sanitation programs in Iraq and Iran.

Norwegian Refugee Council - seconded staff to UNHCR to work in Iraq.

Operation Mercy - sent volunteers, blankets, and tents for distribution at the camps in Turkey.

Oxfam/UK - sent water engineers to Turkey and Iraq.

SCF/UK - provided assistance to groups working in Iran.

Swedish Radda Barnen - seconded staff to UNHCR to work in Iraq.

LEBANON - Civil Strife

| | |
|----------------------|---------------|
| Date | 10/13/90 |
| Location | Beirut |
| No. Dead | 200 civilians |
| No. Affected | 90,000 people |
| Total USC Assistance | \$29,746,896 |

The Disaster

A massive military operation led by the Syrian-backed Lebanese army ousted rebel Christian General Michel Aoun from his Ba'abda Palace stronghold on Oct. 13, 1990. Aoun's occupation of the presidential palace had obstructed a peace process for Lebanon agreed upon by the National Assembly at a conference in Taif, Saudi Arabia, in October 1989. As self-proclaimed leader of Lebanon, General Aoun refused to recognize the election of Elias Hrawi as president in 1989 and rejected the peace plan on grounds that it did not set a timetable for the withdrawal of Syrian troops from Lebanon. Aoun led an unsuccessful six-month battle in 1989 to expel Syrian forces from Lebanon. His cause was further damaged by his failure to gain complete control of the Christian heartland when his troops fought a rival Christian militia in the early months of 1990. (See "Lebanon -Civil Strife" in the FY 1989 and FY 1990 OFDA Annual Reports.)

Frustrated in its attempts to gain Aoun's cooperation for major initiatives to reunify the country and the Lebanese army, the Hrawi government turned first to an economic blockade of the General's enclave and finally to a military showdown. With Syrian aircraft providing air support, the Lebanese army and Syrian armed forces staged an attack on the presidential palace on Oct. 13.

The intense shelling that finally forced Aoun to surrender and seek asylum in the French embassy left at least 200 civilians dead and 720 wounded. Extensive damage was caused to basic infrastructure in 15 villages and communities in the Metn region. Thousands of homes were destroyed, affecting some 90,000 people, and several orphanages, hospitals, and social welfare organizations suffered severe damage.

Action Taken by the Government of Lebanon (GOL) and Non-Governmental Organizations

With the national economy in a state of crisis after nearly 16 years of civil war, the GOL was largely dependent on the continuing relief and rehabilitation assistance provided by international donors. Prime Minister Selim al-Hoss called an emergency meeting of donors on Nov. 14, requesting urgent assistance in removing rubble and repairing institutions that provide essential services to residents of the damaged area.

Assistance Provided by the U.S. Government

On Dec. 3, U.S. Ambassador Ryan Crocker declared that a disaster situation existed in Lebanon as a result of the Oct. 13 conflict. SCF/US, which had an ongoing program in Lebanon, appealed to OFDA for funding to support medical assistance, and the distribution of milk and basic relief supplies in the area of Beirut affected by the recent fighting. A grant to SCF/US in the amount of \$147,896 was signed by OFDA on Dec. 10 to support an expanded emergency program.

A.I.D. continued to fund activities in Lebanon in FY 1991 that responded to general, country-wide emergency needs, including a P.L. Title II food program. Some of the food was diverted for the victims of this disaster, and some of the ASHA (American Schools and Hospitals Abroad) funds may have been spent for medical care at the American University Hospital in Beirut for the injured. It is not possible, however, to separate out these expenditures.

| | |
|--------------|------------------|
| TOTAL | \$147,896 |
|--------------|------------------|

Assistance Provided by U.S. Voluntary Agencies

CRS - using funds from a USAID grant, carried out repair of health care and educational facilities, welfare institutions, and private homes.

SCF/US - assessed on-site damage, began a rubble removal and clean-up campaign, and resumed distribution of P.L. 480 Title II food in all areas, including the Metn region affected by the embargo against General Aoun's Christian enclave. SCF also administered an OFDA grant to provide essential relief items to destitute families and badly needed medical supplies to hospitals and health care centers.

WRF - continued its work begun in 1984 to upgrade skills of medical professionals disabled by armed conflict. WRF also provided modern rehabilitation equipment and supplies.

YMCA/Lebanon - provided continuing assistance to the most needy displaced and war-affected families in Lebanon.

Sweden - donated \$243,564 for the repair of shelters through Caritas and \$1,130,435 to assist a YMCA medical project.

Non-Governmental Organizations

Solidarity (France) - sent a team to assess needs for reconstructing and rehabilitating 93 schools damaged in Lebanese conflicts.

U.N. Friendship Club - donated 80 cartons of clothes.

Assistance Provided by the International Community

International Organizations

EC - donated \$763,855 for hospitals, \$263,852 through NGOs, and \$1,327,019 for repair of the electricity supply through UNDRO. EC and WFP provided 5,889 MT of rice, canned fish, and other food to displaced persons throughout Lebanon.

EC/UNDRO - provided \$1,000,000 for a UNICEF program to repair the Beirut water network.

UNICEF - in a \$3,100,000 program assisted by Germany, continued to repair and improve water supplies in all regions. UNICEF also helped the GOL's Ministry of Health to serve 80,000 patients through 725 dispensaries.

WHO - contributed medical supplies worth \$8,000.

Governments

Belgium - provided generators for hospitals through MSF at a cost of \$126,582, as well as medical assistance valued at \$28,173 through other NGOs.

Canada - donated clothing valued at \$91,667.

Germany - supplied generators for hospitals and orphanages at a cost of \$185,185, and also assisted UNICEF in a water network repair program (see above).

Kuwait - donated \$500,000 for an essential drugs program.

Spain - contributed medicine and medical supplies worth \$100,503.

OTHER EUROPE AND NEAR EAST DECLARED DISASTERS

KUWAIT - Emergency

The international relief community anticipated massive relief needs in the wake of the Gulf War. A U.N. contingency plan had been drafted to deal with the reception, care, and repatriation of a second wave of third country nationals who fled Iraq and Kuwait to neighboring countries in the aftermath of the war. The USG continued to support international relief and repatriation efforts for these people in the form of multilateral grants to key international organizations. Meanwhile, the ICRC and LRCS were positioning themselves in the region to carry out their respective roles in responding to humanitarian needs among populations directly affected by the war, both during the conflict and immediately afterwards. International and U.S. PVOs with staff in the region offered their support. OFDA dispatched its regional advisor, Catherine Farnsworth, to Geneva, Switzerland, during the early stages, to monitor the international coordination efforts and report back to Washington.

OFDA developed contingency plans early on for a USG disaster response in postwar Iraq, focussing on displaced persons or situations that would otherwise meet the criteria for a disaster determination. OFDA also sought to complement efforts by other donors and international relief organizations in the region. In January, OFDA dispatched senior Operations Officer Joseph Gettier to Saudi Arabia to be ready to go into Kuwait with the exiled Kuwaiti government as soon as the situation permitted. Mr. Gettier participated in the first assessment of needs in Kuwait City with the Kuwaiti Government. He also worked with disaster expert Fred Cuny of INTERTECT and OFDA Director Andrew Natsios, who was attached to the 352nd Civil Affairs Command in Kuwait City, to monitor the situation of ethnic minorities in Kuwait. The OFDA contingent also assisted the Kuwaiti Task Force (KTF) to develop the government's plans for postwar relief and reconstruction activities. On Feb. 24, Ambassador Edward Gnehm, from his office in Saudi Arabia, declared a disaster in Kuwait. As a result, additional OFDA resources could be mobilized to respond to emergency needs in the region after the cessation of hostilities.

After the liberation of Kuwait, approximately 30,000 displaced civilians appeared near the Iraq/Kuwait border in the security zone maintained by Coalition Forces. A large number of these people were reportedly in serious

need of medical and food assistance. The majority of them were Bedouins, Iraqis, and third country nationals who had escaped the fighting in Basra that stemmed from the postwar rebellion incited by the Iraqi Shiites. Facilities were constructed for these refugees. The ICRC began providing potable water and medical care to combat a severe outbreak of diarrheal disease and cholera. The U.S. military, through close consultation with OFDA-funded disaster consultants from INTERTECT, set up a commissary-type arrangement at the town of Safwan, just inside Iraqi territory. Food and water were provided for the 30,000 displaced civilians under the condition that they would not settle in the Safwan area. It was believed that the establishment of this temporary feeding center in Iraq, instead of Kuwait, would reduce the flow of Iraqis into Kuwait in search of relief assistance. By late April, approximately 20,000 displaced Iraqi civilians were relocated to a camp at Rafha, just inside Saudi Arabia. IOM had repatriated a substantial number of third country nationals to their home countries.

OFDA contributed \$41,483 of International Disaster Assistance funds for the following activities: \$2,000 for travel of an IOM team from Europe to the Iraq/Kuwait border area to conduct an assessment; \$7,506 to INTERTECT for consulting services provided to the KTF; and \$31,977 to INTERTECT to design an emergency relief project for care of the displaced persons in the border area. (For additional information on USG postwar relief activities, see "Iraq - Displaced Persons".)

| | |
|------------------|-----------------|
| TOTAL USG | \$41,483 |
|------------------|-----------------|

ROMANIA - Floods

Two months of torrential rains starting on the night of July 28, 1991, inundated the Moldavian provinces of Bacau, Iasi, Suceava, and Neamt in northeastern Romania, the same area that was previously struck by seven years of drought. Extremely violent and heavy rains caused the channels of small rivers and streams to swell and overflow which led to the collapse of the earthen Belciu Dam (constructed in 1964 near the town of Onesti for industrial use). The resulting floods ravaged the rural population of 15,000, killing 88 people and leaving 8,000 homeless. An additional 19 people were declared missing.

The inundations also caused the loss of over 13,000 cattle and horses as well as 60,810 ha. of cereal crops, depriving the rural population of those sources of food and transportation. About 10,000 houses were affected, of which 2,325 were completely washed away, and communications and utilities were cut off. In addition, four oil drilling rigs, four kilometers of rail lines, over four kilometers of roads, 69 bridges, and one dam were destroyed. Total damage was estimated at \$50 million, making this disaster the biggest and worst calamity to strike Romania since the 1977 earthquake, which killed over 1,500 people.

The Government of Romania (GOR) collaborated with the Romanian Army, the Romanian Red Cross, and private Romanian groups and individuals to organize and distribute food, blankets, and other relief supplies. The GOR also set up a special financial aid account for disaster victims.

On July 31, U.S. Ambassador Alan Green, Jr., declared that a catastrophe had been caused by the floods and authorized the release of \$25,000 to help with the costs of emergency assistance. Other U.S. agencies participating in the relief effort included Peace Corps/Romania, CWS, and WVRD. The latter agreed to purchase locally and ship the household food equipment funded by the Ambassador's donation, and Peace Corps volunteers helped to identify beneficiaries and distribute relief goods.

The international community responded with over \$935,868 in relief assistance. The EC donated \$228,571 to the relief effort; UNDRO made an emergency grant of \$20,000; UNDP provided \$555,434; UNICEF contributed 200,000 sets of disposable syringes and needles worth \$15,000; and MSF/France provided emergency health kits for 10,000 persons for a three month period.

The following government contributions were reported: Czechoslovakia provided several water purification units; Japan donated \$100,000, 70 tents, 1,000 blankets, five plastic sheets, and two medical kits to the GOR; and the United Kingdom gave a cash contribution of \$16,863.

| | |
|------------------|-----------------|
| TOTAL USG | \$25,000 |
|------------------|-----------------|

SOVIET UNION - Earthquake

On April 29 at 12:13 p.m., a strong earthquake rocked the Soviet Socialist Republic of Georgia. A powerful aftershock jolted the same region on May 3 at 5:00 a.m. Tremors were also felt in Armenia and in the eastern border area of Turkey. Severe damage was reported in the sparsely populated rural areas of the western Caucasus Mountains, in Dzhava, Oni, Ambrolauri, Chiatura, Skmeri, and Sackhere located about 160 km. northwest of the Georgian capital of Tbilisi. The USGS measured the quake at 7.2 on the Richter scale, a reading higher than the 6.8 magnitude temblor that devastated many urban areas in neighboring Armenia in December 1988.

According to LRCS and the International Rescue Corps/UK, the quake caused approximately 270 deaths and injured about 1,500 survivors. An estimated 250,000 people were adversely affected by the calamity, including about 160,000 who were rendered homeless. The shock disrupted electricity and water supplies, as well as sewerage disposal systems, and cut off communications. In addition, the tremor damaged about 50% of infrastructure in the disaster area, including 52 schools and 18 hospitals; 450 houses were leveled and 730 were partially damaged. Total damage was estimated at \$1.7 billion.

The Government of Georgia (GOG) took preliminary steps to resettle homeless victims in other parts of the Republic. The GOG also distributed blankets, medicine, food items, and 5,000 tents from the central reserves in Moscow to the quake survivors. In addition, the GOG put the Georgian Red Cross in charge of heading emergency assistance operations in collaboration with LRCS delegates from other countries, and supplied the relief workers with transportation, storage facilities, office space, fuel, and communications equipment.

On May 17, U.S. Ambassador Jack F. Matlock declared that a state of disaster existed in the earthquake-affected zones of the Republic of Georgia. He authorized that \$25,000 be allotted to the LRCS for the provision of relief goods and services. Inclement weather in the disaster-affected areas hampered the helicopter delivery of emergency items to the mountains. The situation was further compounded by the inability of the Tbilisi airport to accommodate a DOD C-5 aircraft bearing crucial relief supplies. On July 17, 1991, however, the U.S.

LRCS and 10 national Red Cross societies made contributions of cash and tents, blankets, food, and injectors valued at \$814,830.

\$25,000



DAIR communications consultant, Bill Kunderman, and Beverly Youmans, DART information officer
Photo courtesy of Beverly Youmans, OFDA/LAI

Dayton Maxwell (l) and Fred Cole (r),
U.S. DART team leaders at U.N. flag
raising ceremony in Iraq, May 13, 1991
Photo by Franca Brilliante, OFDA/LAI



British helicopter airdropping supplies to
Cukurca camp, one of the largest camps on the
Iraqi-Turkish border
Photo by Renee Bafalis, AID/XA

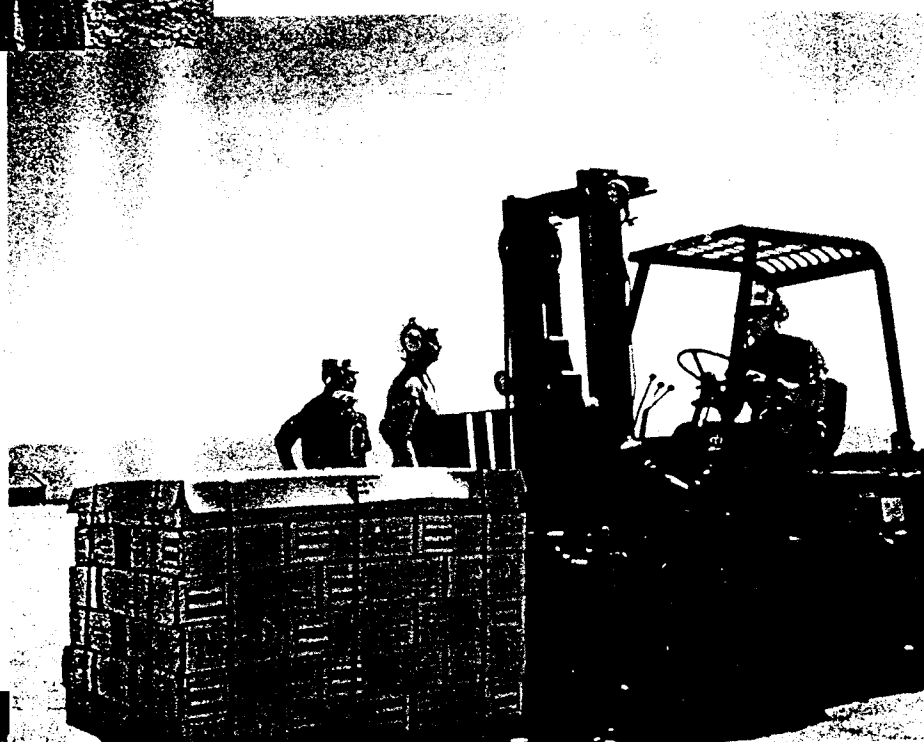


Kurdish family at Isikveren camp
(note how trees have been chopped
down and others stripped bare for
firewood)
Photo by Ronald Libby, OFDA/Forest Service



Children at transit camp near Zakhu, Iraq, standing in front of OFDA-purchased tents
Photo by Franca Brilliant, OFDA/LAI

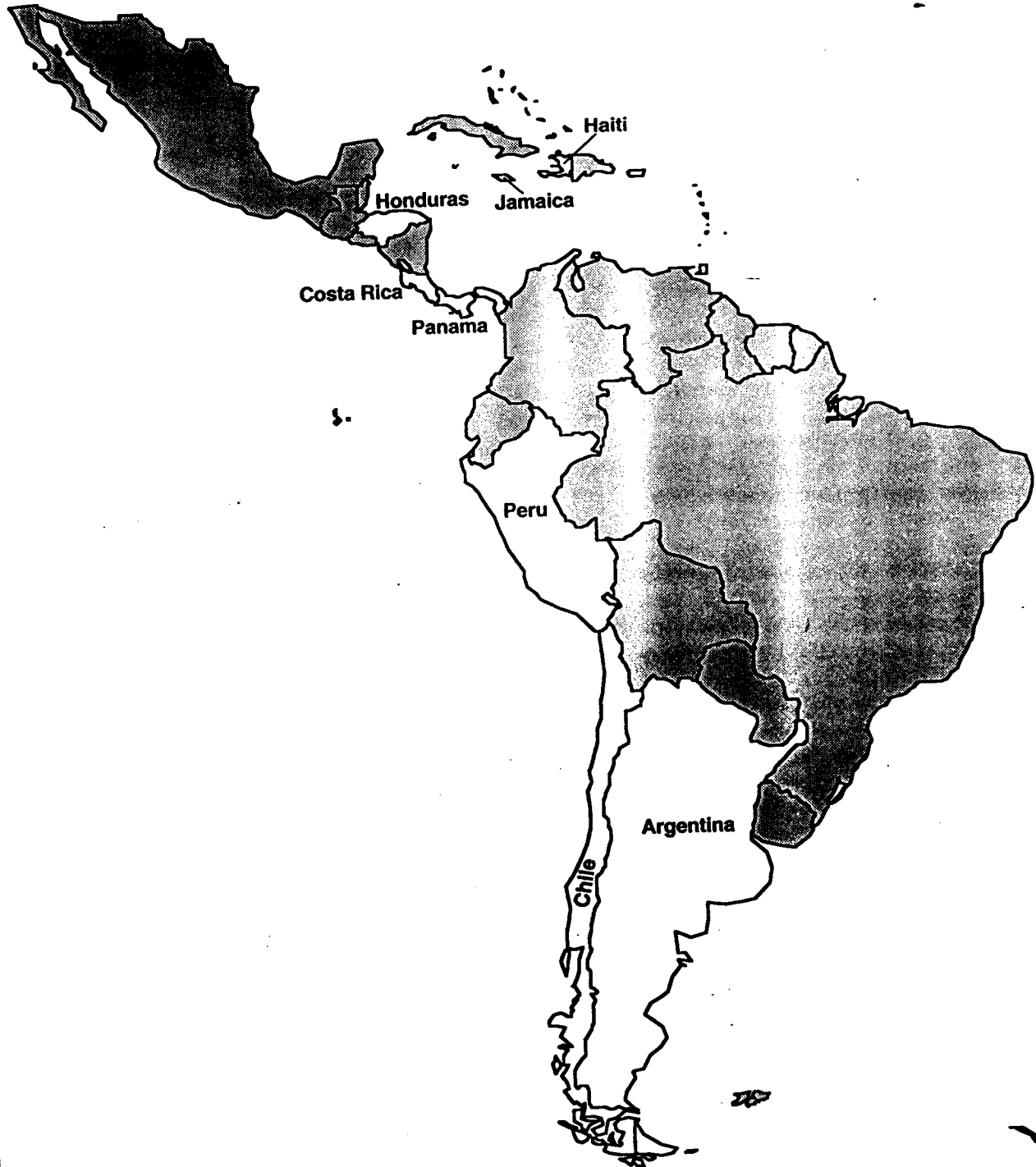
U.S. soldiers moving cases of MREs (part of DOD surplus donated to the relief effort) at Silope, Turkey
Photo by Beverly Youmans, OFDA/LAI



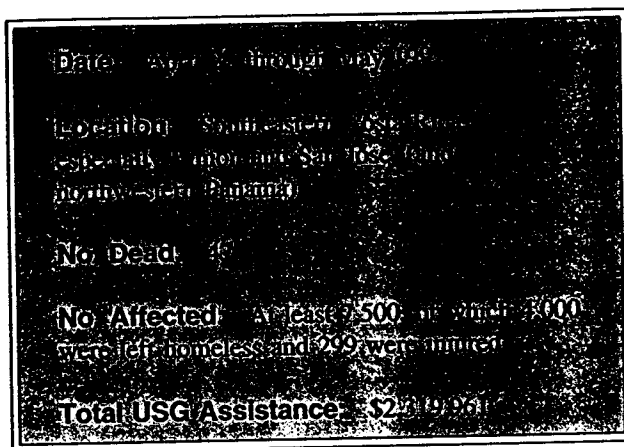
OFDA's Joe Gettier and U.S.-trained interpreter Sgt. Saad stand before burning oil well, just south of Kuwait's border with Iraq. Gettier served in the Gulf for 60 days during the conflict as AID's expert advisor to coalition forces on humanitarian assistance.
Photo courtesy of Joseph Gettier, AID/FHA/OFDA

Latin America and the Caribbean

Latin America and the Caribbean



COSTA RICA - Earthquake



The Disaster

On April 22, at 3:55 p.m. local time, an earthquake measuring 7.4 on the Richter scale shook southeastern Costa Rica and northwestern Panama. This was followed by powerful recurrent tremors of magnitudes 4.0 to 5.9 that struck the same areas from April throughout the month of May (see "Panama -Earthquake" for details on the impact of the disaster on that country). The quake's epicenter was situated approximately 112 km. south of San Jose and about 48 km. south of Puerto Limon. Also as a result of the earthquake, several landslides occurred between San Jose and Puerto Limon.

A joint U.S./Costa Rican team, including USAID Director Ron Venezia, OFDA Regional Advisor Paul Bell, and some members of the local National Emergency Commission (NEC), visited the disaster site to assess the extent of the damage. The team found that throughout the southeastern portion of the country, some 1,254 housing units were partially wrecked and at least 1,154 were completely demolished, leaving approximately 4,000 people homeless and about 299 injured. The quake also caused 47 confirmed deaths, and affected a population of at least 7,500. Observing that most displaced townspeople were forced by circumstances into camping out in crowded town centers and soccer fields, the team recommended that health conditions regarding water and sanitation, especially in Limon and other large towns, be carefully monitored. About 44 public buildings, including schools, health clinics, one hospital, and several churches, also suffered damage. Costa Rica's main state-owned oil refinery, located in Limon, was set afire by the quake.

The most devastating impact of the quake was on the Atlantic region's physical infrastructure. At least 30% of its roads, railways, and bridges were damaged or completely destroyed, including the San Jose-Limon Highway and the highway linking Limon to Sixaola, Panama. (Limon, a port city with 65,000 inhabitants, handles about 80% of Costa Rica's exports.) Thus, an estimated 150 communities were left isolated, lacking food supplies and access to health facilities, and unable to transport their perishable export goods (primarily bananas, but also plantains and cocoa) to market. As a result of this forced isolation, many small and large growers/exporters of bananas and other food crops suffered tremendous export earning losses with millions of boxes of their goods rotting due to inaccessible transport facilities. Local tourism was also dealt a severe blow when many hotels and lodges were flattened, and roads and bridges to those sites were destroyed.

Although the main Atlantic ports continued to operate, they were badly in need of repair and dredging in order for ships to load to full capacity. Serious adverse effects on the local water system included damage to aqueducts, holding tanks, and distribution facilities. The Rio Banano Aqueduct, which produced over 70% of Limon City's water, was demolished by the tremor and could not be repaired until the end of the rainy season. In addition to suffering a water shortage, the local populace lost electricity and telephone services. The total repair/reconstruction costs were estimated at \$90 million (including infrastructure, buildings, and housing).

Action Taken by the Government of Costa Rica (GOCR) and Non-Governmental Organizations

The President of Costa Rica, accompanied by the Minister of Housing and the head of the Social Security Institute, traveled to the affected areas to see for himself the effects of the calamity and to meet with various GOCR institutions, local business people, and neighborhood community leaders to discuss their losses. He informed those with whom he spoke that he had received a \$60 million loan from the World Bank for emergency road and bridge repair, and he also requested further international assistance to help his country cope with the crisis. Meanwhile, the NEC promptly collaborated with other governmental departments at the central, regional, and technical levels, such as the civil guard, the police, the fire department, and the Costa

Rican Red Cross, to implement search and rescue and emergency relief efforts.

Some local private businesses also made contributions. Standard Fruit furnished aid worth \$1,000,000, and the Costa Rican Dos Pinos Dairy Cooperative donated food.

Assistance Provided by the U.S. Government

On April 23, based on the U.S./Costa Rican team's assessment and the appeal for help, U.S. Charge d'Affaires Robert O. Homme issued a disaster declaration and provided \$25,000 to the NEC for its ongoing relief efforts. The same day, OFDA arranged for a U.S. SOUTHCOM C-130 Hercules aircraft to be used in conjunction with several small private airplanes to airlift injured civilians, and to transport relief supplies. The C-130 delivered 100 rolls (260,000 sq. ft.) of plastic sheeting to Costa Rica from the OFDA Panama Stockpile. Also, three SOUTHCOM UH-60 helicopters were provided to transport a U.S. military engineering damage assessment team to the affected areas to assess damage to, and provide assistance in repairing, roads, bridges, port facilities, airfields, and other kinds of infrastructure; to survey and provide food, water, and other items to rural communities; and to evacuate resident U.S. citizens.

The cost of the air operations, including the charter of a plane to fly over Limon to assess damage, amounted to \$265,849 and was paid for out of OFDA funds. The replacement value of the 100 rolls of plastic sheeting was \$28,980.

In June, OFDA arranged with the USGS to send a technical team to Costa Rica and Panama to meet with country counterparts and evaluate the effects of the earthquake, subsequent aftershocks, and ground failure. The expenses of the three-person team, comprising a landslide specialist, a seismologist, and neotectonics expert, came to \$4,132 for the Costa Rican portion of the assessment.

OFDA also provided a Mission allotment for bridge/road repair projects. The A.I.D. Latin America Bureau reimbursed OFDA for the total value of \$1,996,000. These repairs led to an early resumption of Costa Rican agricultural exports valued at approximately \$1 million per day.

Total OFDA \$323,961
Total Other USG \$1,996,000

TOTAL **\$2,319,961**

Assistance Provided by U.S. Voluntary Agencies

(Note: in some cases it is hard to distinguish between aid given solely to Costa Rica and that given to both Costa Rica and Panama for the same disaster. To avoid double counting, contributions unspecified as to country have been listed only once, under either Costa Rica or Panama).

ARC - contributed 10,000 blankets, 60 tents, 105 rolls of plastic sheeting, 1,500 kitchen utensils, 7,500 comfort kits (see "Panama - Earthquake" for information on contents), as well as medical and other emergency assistance.

CARE - airlifted purified water.

CWS - set aside \$12,500 for ongoing relief activities in both countries.

CRS - provided food items.

Operation USA - issued a grant for \$25,000 in humanitarian aid.

Pan American Development Foundation - donated tents, blankets, first-aid and family survival kits, plastic sheeting, rescue equipment, and water.

SCF/UK - established a \$5,000 emergency fund for needy children and their families in Limon, Costa Rica, and provided other relief aid to the disaster-affected areas.

WVRD - provided \$22,129 in earthquake relief.

Assistance Provided by the International Community

International Organizations

EC - allocated \$295,000 through NGOs for the distribution of tents, blankets, and medical supplies.

International Financial Institutes - The IDB issued a grant for \$200,000; the IBRD provided loans.

OAS/Citibank - supplied 200 water jugs (2.5 gallons), 100 bottles of water purification tablets to purify 15,000 gallons of water, 10 first-aid kits, masks, machetes, and lanterns.

ONUCA (a U.N. observer force established to help with the Central American peace process) - provided three helicopters and six medics.

Sistema Economico Latino Americano - sent \$4,500.

UNDRO - sent delegates to the disaster site and dispatched a U.N.-provided helicopter to evacuate injured civilians and transport relief supplies. UNDRO also provided a grant for \$30,000 and appealed to the international community for blankets, tents, water reservoirs, electrical generators, and medical equipment.

University for Peace - gave \$8,475.

WHO/PAHO - sent an assessment team.

Governments

Argentina - gave 12 MT of milk and kitchen utensils.

Canada - gave \$86,957 and financed \$508,475 worth of humanitarian aid, including tents, blankets, generators, and housing reconstruction.

Columbia - provided 4 MT of rice, 3 MT of beans, one-half MT of sugar, and one-half MT each of pasta and potatoes.

El Salvador - offered one airplane, temporary shelters, food, and medicine.

Germany - sent \$88,000 for the local purchase of food, clothes, and other necessities, as well as an assessment team and generators for Limon hospital.

Guatemala - offered unspecified assistance.

Honduras - dispatched helicopters and medics.

Japan - provided tents, blankets, and other relief assistance worth \$166,000.

Mexico - delivered food, medicine, blankets, and mattresses, in addition to offering the services of one C-130 aircraft.

Nicaragua - contributed five helicopters for medivac purposes and gave blankets and mattresses.

Spain - supplied electric generators, tents, blankets, first-aid teams and kits, and water purification tablets, all valued at \$508,475.

Switzerland - provided two teams with trained dogs to search for and rescue survivors trapped under the rubble.

Taiwan - gave \$200,000.

United Kingdom - dispatched a 15-member international rescue team.

Venezuela - delivered rice, beans, sugar, and potatoes, and its President visited Costa Rica.

Non-Governmental Organizations

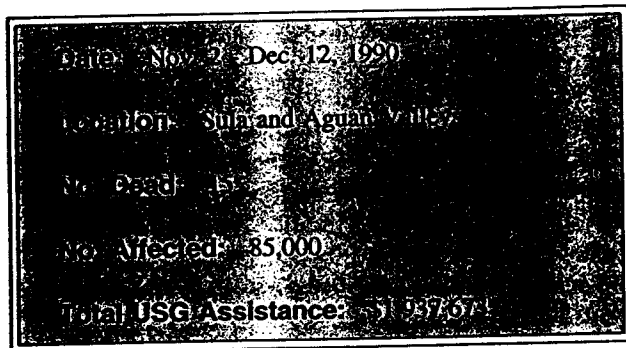
Canada Red Cross - issued a grant for \$4,348.

Finland Red Cross - donated \$112,500 in humanitarian assistance.

International Rescue Corps/ UK - sent a 15-member rescue team and rescue equipment.

Norway Red Cross - provided a cash contribution of \$38,110.

HONDURAS - Floods



The Disaster

During the period from Nov. 2 to Dec. 12, 1990, torrential rains generated serious flooding in the Sula and Aguan valleys in the northern part of Honduras. The heavy rains, together with strong winds and high waves along the north coast, caused several major rivers to overflow their banks. Officials at the El Cajon Dam reported an extremely high water catchment rate that forced the discharge of 960 cubic meters per second of water for an extended period, contributing to the highest flood level ever recorded on the Ulua River. The Ulua and the Chamelecon Rivers inundated the Sula Valley, while the Aguan River inundated the Aguan Valley.

According to USAID/Honduras, 85,000 people were affected by the floods. Of those affected, 15 were killed and approximately 6,000 were left homeless. At least 3,080 houses were either damaged or destroyed. The floods washed out roads and bridges, complicating the transport of essential relief supplies and medicine. In the city of San Pedro Sula, high waters damaged the water system, resulting in a temporary cutoff of drinking water to the city. Banana plantations, sugar cane, and other food crops, as well as livestock, suffered extensive damage. Total flood damage was estimated at over \$48 million.

Action Taken by the Government of Honduras (GOH)

The GOH assigned the Permanent Council for National Emergencies (Spanish acronym COPEN) to coordinate and implement relief and reconstruction efforts. The Honduran army supplied personnel and six trucks to transport relief supplies. COPEN coordinated the procurement and distribution of relief supplies and conducted surveys to establish the extent of the damage and the immediate and long-term needs. COPEN's

regional chapters, CODERES, coordinated relief and reconstruction efforts in their regions. Local chapters were activated to handle relief operations at the local level.

Over 100 local volunteers from the Fire Service, Red Cross, Rotary, Boy Scouts, and Amateur Radio Club assisted in the distribution of plastic sheeting and cotton blankets. In addition, there was a strong demonstration of support from the Honduran private sector in the affected areas. Businesses and individuals contributed services, commodities, and transportation to assist in the relief efforts.

USAID commended COPEN for its efficient handling of disaster relief efforts. Several hundred of the more than 1,200 Hondurans who went through the USAID-financed COPEN training worked in critical supporting roles throughout the disaster.

Assistance Provided by the U.S. Government

At the onset of the floods, USAID/Honduras made available to COPEN and the Ministries of Health and Public Works the amount of \$1,854,621 to finance the following activities: per diem costs for individuals working in emergency activities; fuel and lubricants required for emergency activities; food, clothing, temporary shelter, and tools; infrastructure repairs on 148 km. of rural roads in coffee plantations and other emergency repairs on main roads and bridges; and the procurement of medicine, materials, and supplies for the health sector.

After receiving an appeal from the GOH for emergency assistance, U.S. Ambassador Cresencio Arcos declared on Dec. 3, 1990, that a disaster existed warranting USG emergency assistance. The \$25,000 Ambassador's Authority was donated to COPEN for local purchase of relief supplies. OFDA's Regional Advisor, Paul Bell, traveled to Honduras to assess the situation and advise an appropriate USG response. OFDA arranged for DOD transport of 120 rolls (312,000 sq. ft.) of reinforced plastic sheeting, 5,166 cotton blankets, and six tents from its stockpile in Panama. On Dec. 4 the commodities were airlifted to Honduras, loaded onto six trucks from the Honduran army, and taken immediately to the operations centers of the CODERES. DOD transport, replacement purchase of the plastic sheeting,

and shipping costs to replace the plastic and blankets to the stockpile totaled \$55,604. The tents were not replaced in the stockpile and were considered an in-kind contribution valued at \$2,448.

Red Cross - various member societies sent volunteers and rescue teams for evacuation, and contributed a total of \$103,000 in cash.

Total OFDA \$83,052
Total USAID \$1,854,621

TOTAL **\$1,937,673**

Assistance Provided by the International Community

International Organizations

EC - provided \$139,000 to the MSF/France emergency relief program.

UNDP - donated \$30,000 to cover transportation and handling services.

UNDRO - contributed \$15,000 to cover local expenses for emergency needs.

WFP - provided 89 MT of corn, beans, packed-fish, and vegoil.

LRCS - contributed \$13,423 to emergency relief efforts.

Governments

France - channeled medicine, 200 MT sugar, and 160 MT vegoil through UNHCR.

Germany - provided \$70,000 to purchase medicine, tools, and construction materials.

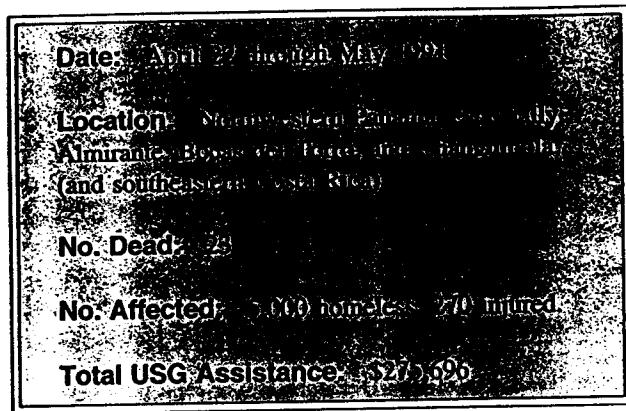
Governments of Spain, Mexico, and the United Kingdom - gave in-kind contributions of food, materials, and technical assistance.

Japan - provided \$100,000 for medicine, blankets, tents, cots, and tools.

Non-Governmental Organizations

MSF/France - established an emergency relief program to provide drugs, medical equipment, and medical staff.

PANAMA - Earthquake



The Disaster

On April 22, 1991, a 7.4 magnitude earthquake rocked northwestern Panama and southeastern Costa Rica (see "Costa Rica - Earthquake"). Following the quake, several aftershocks, registering from 4.0 to 5.9 on the Richter scale, jolted the same areas throughout the next month. The most serious effects in Panama were felt in the towns of Changuinola, Almirante, Bocas del Torro, and Guabito, where widespread flooding and severe structural damage were reported.

On April 23, a joint team of U.S. and Panamanian experts visited the affected areas to assess the damage caused by the temblor. The team was comprised of an A.I.D. official, two physicians, the Secretary of the Ministry of Government and Justice, and the Vice Minister of Housing. Based on communication with local residents and overflights above the disaster site, the U.S./Panama team assessed that approximately 850 to 1,000 homes caved in, resulting in 23 deaths and 270 injuries. Buildings still standing were cracked, sheared in half, or had sunk one meter into the ground, and thus were structurally unsound, leaving about 5,000 homeless. No potable water was available, nor was there any electricity due to the extensive damage to the power lines.

The tremor also dealt a severe blow to businesses in the affected areas. Local economic activity essentially consists of exports of bananas, banana puree, melons, pineapples, lobsters, and other kinds of seafood, as well as cardboard boxes to Europe. As the Sixoala bridge from Panama to Costa Rica collapsed during the quake, and ferry owners could not afford dredging operations to deepen the channel to allow the passage of their ferries,

badly needed staple supplies and medicines to the disaster site were also cut off.

Action Taken by the Government of Panama (GOP)

To respond to the extensive damage caused by the earthquake, the GOP declared a national state of emergency, established an operations center in Changuinola, organized disaster assessment teams and relief activities for all affected areas, and appealed for international emergency assistance. Through special supplemental legislation, the GOP allocated \$10 million for earthquake reconstruction.

Assistance Provided by the U.S. Government

In response to the GOP's appeal for help and the U.S./Panama team's assessment, U.S. Ambassador Dean R. Hinton declared a disaster on April 23, releasing \$2,086 from his Ambassador's Authority to fund a USAID/Panama assessment of the stricken area. On April 24, OFDA Regional Advisors, a USAID official, and a Mission engineer traveled to Changuinola to further assess the extent of the crisis and to conduct field operations.

Following the assessment, OFDA tasked DOD to transport 225 rolls (585,000 sq. ft.) of plastic sheeting, 1,000 blankets, and eight 3,000-gallon water bladders from the Panama stockpile to the disaster victims and to provide 40 cases of Meals Ready to Eat (MREs). Transport costs totalled \$15,000, plastic sheeting was valued at \$65,205, blankets were valued at \$4,050, and MREs were worth \$2,046. OFDA also obligated \$4,516 to locally purchase fuel for DOD relief flights and arranged with DOD to provide a reverse osmosis water purification unit at a cost of \$3,840.

A USGS team, funded by OFDA, traveled to Panama to examine the effects of the earthquake and to provide technical expertise. The team's travel expenses totaled \$2,868. OFDA also paid travel costs for a seismic expert to assess earthquake damage and sponsored a seismic technician who repaired, installed, and ensured proper usage of seismic equipment. Their travel costs combined totaled \$5,085.

The U.S. military from SOUTHCOM provided medical assistance, transported medical supplies to disaster victims, and provided 40 cases of military MREs (paid for by OFDA) for relief workers to the affected areas. In addition, the Panama Canal Commission donated 16 pallets of plywood and medical supplies worth \$21,000 from the U.S. Excess Property Program to the GOP for reconstruction efforts.

In May, USAID/Panama allocated \$150,000 under its Immediate Recovery Project to provide matching funds for self-help activities at the community level.

Summary of USG Assistance

| | |
|---|------------------|
| Ambassador's Authority | \$2,086 |
| DOD transport of plastic sheeting, blankets, water bladders and MREs (OFDA) | \$15,000 |
| Value of plastic sheeting (OFDA) | \$65,205 |
| Value of blankets (OFDA) | \$4,050 |
| Fuel for DOD flights (OFDA) | \$4,516 |
| Travel costs for USGS team (OFDA) | \$2,868 |
| Travel costs of seismic expert and seismic technician (OFDA) | \$5,085 |
| Cost of 40 cases of MREs (OFDA) | \$2,046 |
| Use of DOD water purification unit (OFDA) | \$3,840 |
| Medical supplies and 16 pallets of plywood (Panama Canal Commission) | \$21,000 |
| Allocation of funds under Immediate Recovery Project (USAID/Panama) | \$150,000 |
| Total OFDA | \$104,696 |
| Total Other USG | \$171,000 |

TOTAL \$275,696

Assistance Provided by U.S. Voluntary Organizations

ARC - dispatched delegates to provide medical and relief services to the disaster victims. ARC also shipped a consignment of 8,000 blankets, six tents, 1,000 kitchen utensils, and 7,500 comfort kits consisting of personal hygiene items and toys for children, and gave \$4,386 in cash to Panama.

SCF/US - provided relief services.

Assistance provided by the International Community

International Organizations

UNICEF- dispatched \$25,000 worth of food, medicines, and other medical supplies.

Governments

Belgium - provided tents, blankets, generators, and water tanks valued at \$72,046 via MSF/Belgium.

Canada - sent \$43,478 through LRCS and \$26,087 worth of medical supplies through PAHO to Panama.

Finland - gave \$27,681 through LRCS.

Italy - provided three generators, 200 tarpaulins, 150 kitchen sets, 141 family kits, and 25 tents (including transportation) at a cost of \$52,500, via UNDRO.

Japan - donated \$128,000 worth of emergency assistance to Panama.

Spain - gave 50 tents, 500 blankets, one MT of medicine, and 1.348 MT of first-aid materials valued at \$157,143. Transportation costs of these relief supplies was \$32,381.

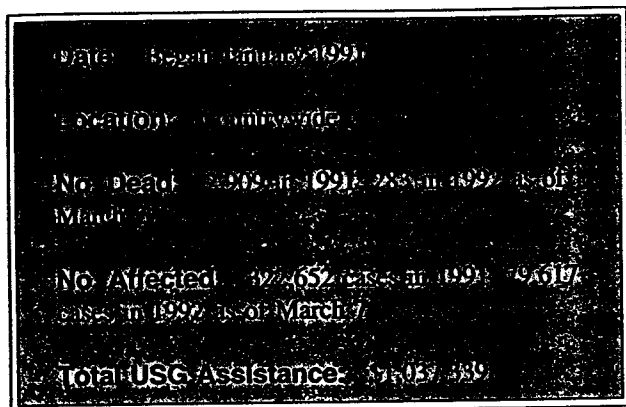
United Kingdom - gave \$17,544 for the local purchase of various emergency items.

Non-Governmental Organizations

The following Red Cross societies made cash donations:

Canada Red Cross - \$2,174
Finland Red Cross - \$18,750
Germany Red Cross - \$29,586
Norway Red Cross - \$19,055
Sweden Red Cross - \$16,393
United Kingdom Red Cross - \$4,386

PERU - Epidemic



The Disaster

The first case of what was to become the first cholera epidemic in this century in the western hemisphere was reported on Jan. 23, 1991, in the port of Chancay, some 60 km. north of Lima. Fifty-three cases were reported in Chancay on Jan. 29, by which time smaller outbreaks were also occurring in Chimbote and Piura, coastal towns to the north. The cholera organism was positively identified in laboratory tests on Feb. 4 as *vibrio cholera* of El Tor biotype.

The epidemic spread rapidly up and down the coast and in some of the highlands, reaching a peak in February (60,208 cases and 285 deaths), March (77,893 cases and 762 deaths), and April (52,659 cases and 555 deaths). By March, the epidemic had also spread to the Amazon Basin where the number of cases rose markedly in April and May. From May to October, the overall number of cases declined for the country, but smaller outbreaks began to occur again in November with the beginning of summer in the southern hemisphere. The total number of probable cholera cases in Peru in 1991 reached at least 322,652, with 119,523 hospitalizations and 2,909 deaths. Some tracking of statistics, however, may have been neglected during a long-term strike of Ministry of Health personnel during 1991. (As of March 7, 79,617 probable cases of cholera had been reported in 1992, with 35,814 hospitalizations and 283 deaths.)

In July 1991, government reports indicated that the highest incidence of the cholera epidemic had been in coastal departments, with 86% of the cases, 82% of hospitalizations, and 41% of the deaths. The case-fatality rate in the coastal departments was the lowest of the three regions due to better access to health services. In the highlands and jungle areas, however, where

health facilities were scarce to non-existent, the case-fatality rate was eight to nine times higher than in the coastal areas.

Cholera is an intestinal disease spread through contaminated water or food and causing diarrhea and severe fluid loss that can lead to death in a matter of hours, if left untreated. Although the source of introduction of the disease in Peru was undetermined, conditions favoring the development of an outbreak of cholera clearly existed, especially among the large shantytown populations lacking access to safe water. A team from the Water and Sanitation for Health Project (WASH), tasked by USAID/Peru to conduct an assessment, noted that the water supply and sanitation conditions in Peru had been characterized as a disaster waiting to happen. According to a report submitted by the WASH team, poorly maintained infrastructure subjected most urban water supplies to contamination from leaks, back-siphoning, and cross-connections. Chlorination of water supplies was rare, and most areas were not serviced by properly functioning sanitary sewers. In the poorest neighborhoods, residents were not connected to piped water or sewage systems and had to make use of public standpipes or buy water from vendors. Poor hygienic practices created a serious danger of contamination of stored water and food. The common practice of discharging raw sewage into the sea was suspected as a source of contamination of coastal fishing grounds. This was of major concern as fish is a main staple in the diet of coastal populations.

The cholera epidemic, once started in the Americas, did not stop at Peru's borders, although nowhere else did the outbreak strike with such severity. Cases were also reported in Ecuador, Colombia, Chile, Brazil, Bolivia, Guatemala, Panama, El Salvador, and Mexico.

The epidemic had a serious impact on Peru's already strained economy. By Feb. 25, losses in export revenues were estimated between \$132-\$343 million due to the cancellation of contracts in several countries that purchase Peru's fruits, vegetables, fish, and seafood. Approximately 10,000 fishermen were put out of work by the drop in sales of fish and seafood. In a visit to Peru in mid-March, WHO's Director-General estimated total costs of the epidemic at \$1 billion, and appealed for international assistance to help Peru strengthen its

medical infrastructure, and rebuild its water and sewage treatment facilities.

Action Taken by the Government of Peru (GOP)

The Office of Epidemiology of the GOP's Ministry of Health (MOH) sent a team of field epidemiologists to Chancay when the first cases of suspected cholera were reported. Once the disease was positively identified, the GOP promptly organized a nationwide control and treatment program. The GOP declared a national health emergency to last for 120 days in the most severely affected regions, and appealed for international assistance to provide drugs, ORS, hospital and laboratory equipment, support for educational programs, and technical expertise.

The MOH began an educational campaign to alert the public to the symptoms of the disease, and to recommend the adoption of preventive measures such as boiling water, cooking fish and seafood thoroughly, disposing of human wastes safely, and handling food hygienically. The MOH also sent extra medical supplies to health facilities in the affected areas and informed health personnel of the appropriate treatment procedures. Assisted by the Peruvian air force, the MOH airlifted between seven and ten tons of medical supplies to different department health units daily. Fortunately, the MOH had adequate supplies of IV solutions and ORS on hand for early successful treatment of patients. This reduced the case-fatality rate to below 1% countrywide. As of Feb. 27, the GOP had allocated \$4 million to fighting the epidemic.

The GOP recognized that to prevent cholera from becoming endemic, long-term measures were required. At a Feb. 24 press conference, the Minister of Health declared the GOP's intention to repair and extend water and sewer lines. He added, however, that resource constraints would prohibit such work in the near future. The emphasis, therefore, remained on shorter term prevention and control. On March 5, the Health Minister submitted a formal request to USAID/Peru for the services of two specialists from the Drinking Water Quality Research Division of the U.S. Environmental Protection Agency (EPA) to provide technical assistance to strengthen control measures. In late April, an inter-ministerial "National Multi-Sectoral Commission for the Fight Against Cholera" was established by the GOP.

The commission was chaired by the Minister of Health and attended by several other ministries, including housing, education, agriculture, and fisheries. Upon the recommendation of the commission, the GOP approved a plan to improve environmental sanitation and adopted a plan for cholera control and prevention for the period 1992-93. A sectoral cholera committee headed by the Vice-Minister of Health managed specific aspects of the anti-cholera campaign and coordinated with external donors.

Other local organizations helping to combat the cholera outbreak included the Center for Disaster Study and Prevention and the Project for Integral Development, both of which provided educational resources and other assistance. In northern Peru, a Church World Service colleague agency, the Fisheries, Agriculture, and Livestock Promotion Services (SPA), helped find alternative employment for those whose fishing livelihood had been lost.

The GOP cooperated fully with other governments in Latin America concerned that the disease would spread to their countries. Peruvian health officials met in Lima on Feb. 27 with health ministers from Bolivia, Colombia, Chile, Ecuador, and Venezuela to coordinate preventive action. This was followed by an intergovernmental meeting in Bolivia April 20 to 22, and a PAHO-sponsored seminar in Washington, D.C. from April 29 to May 3. On May 15, Peru and Brazil signed a joint anti-cholera strategy agreement, and Brazilian doctors traveled to the Peruvian Amazon region to help care for cholera victims in communities having little access to health services. Presidents of the Andean Pact countries (Bolivia, Colombia, Ecuador, Peru, and Venezuela) met in Caracas on May 17 to draft a three-year plan entitled "Andean Emergency Health Program: Cholera."

Assistance Provided by the U.S. Government
A.I.D. development programs, under the Child Survival Project, had supported the MOH and local health institutions for several years before the cholera epidemic began. These programs helped the MOH identify and respond to the epidemic quickly, holding the case-fatality rate to a low level. The field epidemiologists sent to investigate the first reported cases had participated in the A.I.D.-supported Field Epidemiology

Training Program. USAID/Peru further assisted the MOH by developing a computerized health information system which enabled the MOH to track the course of the epidemic. The Child Survival Project also supported training for diarrheal disease control which prepared the MOH staff to begin prompt treatment of cholera victims with the use of ORS. Using P.L. 480 Title I counterpart funds, USAID/Peru assisted with the local procurement of ORS. At the request of the MOH, USAID/Peru arranged for two senior CDC epidemiologists to travel to Lima on Feb. 10 to work with local epidemiologists in designing and implementing control measures. The CDC team was joined on Feb. 27 by three more CDC epidemiologists.

Because of the severity of the outbreak and the limitation of country resources, U.S. Ambassador Anthony Quainton responded to the GOP appeal for international assistance with a disaster declaration on Feb. 26. OFDA augmented the Ambassador's Authority to provide a total of \$42,000 for the local purchase of medicine, which included 22,000 bottles of IV solution and 10,000 IV sets (tubing). OFDA arranged with DOD to transport the medicine to Peru from Bogota, Colombia, where it had been purchased. The first planeload arrived on March 8 in a USSOUTHCOM C-141. The second load arrived on March 10 on a C-130 aircraft of the Colombia Air Force. The cost of the airlift was \$28,000. Most supplies were used in the Cajamarca Department, one of the most severely affected regions.

On April 5, a U.S. Air Force C-5A Galaxy aircraft delivered 70 tons of supplies to Peru, including two tons of hospital beds from DOD and 65 tons of medical supplies contributed by U.S. PVOs, Project Hope, and WVRD.

USAID continued to support control efforts of the MOH by providing and coordinating the provision of various types of technical assistance. At the request of the GOP, two specialists from EPA traveled to Peru to assess the water quality, while a team from the U.S. Food and Drug Administration (FDA) conducted a food safety assessment of the seafood industry. The Office of International Health of the U.S. Department of Health and Human Services arranged with PAHO to send the second CDC team, and the EPA and FDA teams to Peru.

In March, USAID requested a team from the WASH to survey the country's water supply and sanitation sector, with respect to the cholera epidemic. The team submitted a field report entitled "Cholera in Peru: A Rapid Assessment of the Country's Water and Sanitation Infrastructure and its Role in the Epidemic." Additional WASH assistance was requested to organize a four-day workshop in June, with the participation of 35 people from 25 different institutions dealing with potable water supply and sanitation. Three experts from WASH worked with staff from the GOP's Multi-Sectoral Cholera Committee to draft a national master action plan for water and sanitation services for the medium term.

To assist efforts by A.I.D. Missions in Latin America to control cholera in the region, the Latin America Caribbean Bureau made available an additional \$10 million in development assistance funds for a two-year program, beginning in FY 1991. The funds were added to the regional Health and Nutrition Technical Services Support Project to provide technical support from A.I.D. central projects, as well as to establish agreements with the CDC and the U.S. Public Health Service. Missions were invited to submit requests after consulting their respective ministers of health.

Summary of USG Assistance

OFDA Assistance

Ambassador's Authority used for purchase of medicine \$42,000

DOD airlift of medicine from Colombia \$28,000

Other USG Assistance

USAID/Peru

Travel cost of first CDC team \$7,000

Buy-in for technical assistance in health communications..... \$70,000

DOD

Transport of medical supplies and donation of equipment \$274,000

| | |
|--|--------------------|
| LAC Bureau | |
| Travel of second CDC team, EPA and FDA teams (HHS/OIH/PAHO)..... | \$20,000 |
| WASH survey | \$27,000 |
| WASH health project..... | \$40,250 |
| LAC Regional Program | |
| WASH workshop | \$83,410 |
| Travel of experts and clinical training workshop..... | \$12,654 |
| Health communications technical assistance | \$94,010 |
| ORS quality control equipment for Laboratorios Unidos (LUSA) (through HHS/PHS)..... | \$16,065 |
| IV fluids (HHS/PHS) | \$78,440 |
| Supplies for the National Health Institute (HHS/PHS)..... | \$235,000 |
| CDC technical assistance..... | \$9,510 |
| Total OFDA | \$70,000 |
| Total Other USG | \$967,339 |
| TOTAL | \$1,037,339 |

CRS - provided medical supplies and training worth \$56,000.

UNICEF - provided IV solutions, IV administering sets, ORS, antibiotics, and support for media campaigns and training. Assistance to Peru amounted to \$588,000.

WHO/PAHO - sent medical teams and supplies, coordinated the relief effort, and convened seminars.

Governments

Argentina - gave 20 MT of medicine.

Austria - donated medical supplies.

Bolivia - sent a medical team and three MT of medicine.

Brazil - provided medical personnel and supplies, all valued at \$200,000.

Canada - provided \$412,000 in grants to PAHO, UNICEF, and NGOs for sanitation and medical programs.

Chile - gave medical assistance worth \$47,000.

Colombia - donated medicine and ORS.

Cuba - airlifted IV fluids and antibiotics at a cost of \$45,000.

Dominican Republic - sent medicine.

France - dispatched a team of epidemiologists and one MT of medicine. The assistance was valued at \$40,000.

Germany - donated antibiotics, water treatment supplies, and support to health services, all valued at \$343,760.

Ireland - gave \$30,000 through UNDRO and PAHO.

Italy - donated \$5,000 worth of antibiotics and IV sets.

Japan - contributed medicine and medical supplies worth \$532,000.

Mexico - donated medicine valued at \$25,000.

Netherlands - gave \$59,524 through PAHO.

Norway - provided \$155,000 through NGOs.

Spain - sent relief flights to Peru, Bolivia, and Ecuador, all valued at \$1,792,000.

Sweden - donated \$141,000 through NGOs.

Switzerland - sent a medical team, medicine, and supplies at a cost of \$197,000.

United Kingdom - provided \$210,840 worth of aid.

Uruguay - donated medicine and other supplies.

Vatican - gave \$30,000.

Venezuela - sent 10 MT of medicine worth \$10,000.

Non-Governmental Organizations

Adveniat (Germany) - contributed \$68,000.

Caritas (Austria, Germany, Italy, Netherlands) - gave \$302,000.

Diakonisches Werk - donated \$209,000 to support health programs.

Medecins du Monde - sent a team and supplies.

MSF (Belgium, France) - sent a team and 17 MT of supplies.

Red Cross Societies (Austria, Colombia) - donated \$19,000 worth of medicine.

Secours Catholique (France) - contributed \$141,000 worth of assistance.

OTHER LATIN AMERICA AND CARIBBEAN DECLARED DISASTERS

ARGENTINA - Volcanic Eruption

Following seismic activity measuring two to five on the Richter Scale, Mount Hudson Volcano, located in southern Chile, began a series of major eruptions that lasted from Aug. 8 through Aug. 26, 1991. This volcano eruption occurred after a 20-year dormant period. Initially, ash and gas emissions moved primarily north toward Chile. Powerful gales (140 kph.), however, changed the direction of the fallout, and caused it to move southeastward from the northwestern to the southeastern regions of neighboring Argentina, reaching as far as the Atlantic coast.

Heavy accumulations of ash and coarse sand from 10 to 50 cm. thick were reported in the Argentine towns surrounding the volcano, especially in the sparsely populated semi-arid southwestern province of Santa Cruz. Thick layers of ash and lapilli-sized sand deposits, combined with heavy rain, snowfalls, and ice blocks up to five meters in diameter dislodged from a large glacier at the mouth of the volcano, covered large expanses of Argentine agricultural lands and river valleys. As a result, about 175,000 ha. of grazing fields became unusable and food and water supplies were contaminated. In addition, many expensive, partially-completed mineral exploration surveys were terminated due to excessive ash-contamination of those areas.

Although no casualties were reported, an estimated 62,000 people (in Chile and Argentina) were affected, of which approximately 1,200 were left homeless. The affected population also suffered respiratory and gastro-intestinal problems, as well as eye and nose infections. These problems were caused by the distribution of volcanic dust particles with a high content of sulfur dioxide, fluoride, and other chemicals and noxious gases. Difficulties in livestock feeding, resulting from wasted grazing fields and contaminated waters, adversely affected roughly 600,000 cattle and sheep. The local salmon fishing industry also suffered when large numbers of fish perished due to heavy accumulations of ash, silt, and sharp glass shards. Transportation and communications were cut off in this already remote and desolate part of the world.

The Government of Argentina (GOA) promptly dispatched a team of medical and national emergency experts as well as officials from the Ministries of Interior, Agriculture, and Public Works to the affected

area to assess the situation, and coordinate and head local relief efforts. The GOA military provided victims in Santa Cruz with 6,000 disposable gas masks, food, water, fuel, and medical supplies through the Argentine Red Cross. In addition, the GOA evacuated affected residents to emergency shelters in safer regions of the country. The provincial government reserved \$50,000 to deal with the crisis. The Argentine American Chamber of Commerce in the United States offered free air travel and hotel accommodations to all U.S. emergency experts sent to help deal with the disaster. Aerolineas Argentinas volunteered to transport all international donor relief supplies free of charge.

On Aug. 19, 1991, following an appeal for international emergency assistance from Argentina's Minister of Health, U.S. Ambassador Terence A. Todman used \$25,000 provided under his Disaster Assistance Authority to help alleviate the effects of the volcanic eruption on the population of Santa Cruz. The funds were used to provide the Argentine Ministry of Health (MOH) with 400 pairs of industrial goggles, and, through the U.S. Salvation Army, 1,500 liters of mineral water and 1,500 liters of milk, as well as eye drops and industrial tape to MOH officials in Santa Cruz.

Subsequently, OFDA arranged to send Dr. Carol Rubin, a veterinarian, to investigate livestock problems caused by the volcano. Her travel expenses amounted to \$3,579. OFDA also contributed 5,000 disposable respirator face masks from the Panama stockpile.

UNDRO/UNDP requested the loan of radio-linked seismographs from Colombia, and asked the USG for equipment and expertise for field measurement of fluorides and other poisonous elements, to assess the risks associated with the volcanic eruption. In addition, UNDRO arranged with the USG to send Dr. Norman Banks of the Cascades Volcano Observatory in Vancouver, Washington, to Argentina and Chile. Dr. Banks' objective was to determine the short- and long-term impact of the volcanic eruption on Argentine human and livestock health, and to make recommendations for minimizing the adverse effects of the disaster.

Israel gave the GOA 2,000 gas masks.

TOTAL USG

\$28,579

On June 18, 1991, a series of torrential rain storms pounded the desert city of Antofagasta (pop. 200,000), the largest city in northern Chile, as well as other neighboring Atacama Desert towns. Antofagasta, which has a normal annual rainfall of 4.9 mm., received 40 mm. of rain during the June deluge. The torrents, accompanied by powerful gales and freak snowstorms, caused the collapse of Antofagasta's water storage tank. The combination of heavy rains and the tank collapse led to widespread flooding which provoked massive mudslides in a low-income area of the city.

The inundations and mudslides destroyed 600 houses and partially damaged another 6,000 dwellings. Facilities for providing social services such as electricity, water and sewage systems, education, and primary health care were severely damaged.

Deciding that the GOC was unable to meet the needs of all its flood/mudslide victims, U.S. Ambassador Charles A. Gillespie declared a disaster on June 19 and gave \$5,000 under his Disaster Assistance Authority to the mayor of Antofagasta for the relief efforts. He used another \$3,000 to pay shipping costs for 30 rolls of plastic sheeting from the Panama stockpile. The plastic was turned over to the Municipality of Antofagasta for

The international community also contributed to the relief effort. UNHCR supplied seven MT of emergency supplies and airlifted victims desperately in need of medical care. Spain contributed 100 tents, 2,000 blankets, 465 kg. of medicines, and 5,000 20-liter water containers, all valued at \$134,900. Transportation costs were \$18,870. Japan gave tents, blankets, medicine, and water purification tablets worth \$111,773, including transportation. Denmark allotted \$29,400 through Caritas. The United Kingdom provided 130 tents and medicine having a total value of \$17,300.

On Dec. 22, 1990, an earthquake registering 5.8 on the Richter scale shook the northern part of Costa Rica, 30 miles outside San Jose. The earthquake, which was followed by a series of aftershocks of smaller magnitudes over the next three days, occurred at a depth of 58 km. Primarily affected were the provinces of Alajuela, Heredia, and San Jose.

The President of Costa Rica declared the affected areas a national emergency zone on Dec. 24, and activated the Emergency Operations Center of the National Emergency Committee. Emergency operations were undertaken locally by relief teams, including the police, firefighters, rural and civil guards, and the local Red Cross. The National Council of Production distributed food in affected areas. On Dec. 28, the Government of

Costa Rica (GOCR) issued an appeal for international aid.

On Jan. 3, 1991, the U.S. Deputy Chief of Mission, Robert Homme, declared that a disaster existed in Costa Rica. He requested materials from OFDA to construct temporary housing for the evacuees sheltered in public schools to ensure that the schools would be available for the opening of the school session. OFDA authorized \$7,000 to DOD to airlift 100 rolls of plastic sheeting from the Panama stockpile and eight 3,000-gallon water tanks to Costa Rica. The plastic sheeting, including the cost of restocking the stockpile, was valued at \$29,980, and the water tanks were valued at \$15,696.

International relief agencies, including PAHO, IFRC, and UNDRO/UNDP worked with OFDA and the GOCR to assess the earthquake's damage.

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| TOTAL USG | \$52,676 |
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COSTA RICA - Floods

From Aug. 11 through Aug. 15, 1991, raging torrents of rain hit Costa Rica and neighboring Panama (see "Panama - Floods" for details on the impact of the disaster on that country). In Costa Rica, the resulting 100 plus centimeters of rainfall precipitated severe flooding and landslides, displacing people in the densely populated areas of Turrialba, Talamanca, and Valle de la Estrella, and in towns near southern Limon. The same areas were struck by the April 22 earthquake earlier that year.

Costa Rica's National Emergency Committee (NEC) reported that some 56 villages were submerged and approximately 54 communities were isolated (mostly in Valle de la Estrella and Talamanca), affecting an estimated 33,000 families (about 165,000 people). At least 3,500 homes were destroyed, leaving possibly as many as 20,000 people homeless. Fortunately, there was only one confirmed death. Such low casualties were attributable largely to the country's high level of public awareness and efficient communication networks. About 50 U.S. citizens were stranded in Puerto Viejo, located near Limon City.

The floods cut off 28 rural water supply lines and contaminated the water in wells used by people in the disaster area. Damage to the infrastructure was

extensive: eight highways were destroyed, at least nine bridges collapsed, roads were washed out, and railway services were disrupted. Continuous rain, combined with road and bridge destruction, complicated search and rescue operations and ruined A.I.D.-financed earthquake reconstruction efforts implemented in April. The local economy also suffered tremendously with the loss of over 4,500 ha. of large-scale banana plantations and small-farmer operations, which totaled an estimated \$8 million in damage.

At a meeting with key donor representatives on Aug. 14, the Government of Costa Rica (GOCR) appealed for relief transportation, portable water equipment, temporary shelter materials, electric generators (13-15 kws.), chlorine tablets for water purification, radio equipment to monitor the water level of the Pocosi and Sigueres rivers, and other international assistance to help its people cope with the disaster. The NEC, firemen, civil and rural guard, and the Costa Rican Red Cross received air-amphibious transportation assistance for evacuation and rescue efforts in the form of helicopters from the Nicaraguan Air Force and the U.S. Army, as well as boats supplied by national institutions. In addition, the GOCR set up 26 emergency camps housing 7,958 displaced persons, and provided them with food, water, milk, medicine, clothing, blankets, and mattresses. The Costa Rican Ministry of Health (MOH) promptly took action in the health sector by monitoring the disaster-affected area for evidence of water-borne diseases such as cholera, providing chemical latrines for the emergency camps, rebuilding medical centers, supplying drinking water, and supervising the distribution of food to isolated zones.

On Aug. 12, 1991, U.S. Deputy Chief of Mission Robert Homme declared the situation a disaster and exercised his Disaster Assistance Authority. The \$25,000 was used for SOUTHCOM's provision of 20 hours of helicopter flight time for relief and evacuation purposes. OFDA later augmented these funds by \$80,000 to cover the cost of 60 additional hours of helicopter flying time, and to airlift 160 rolls of plastic sheeting from Panama to Costa Rica for the construction of temporary housing. The replacement cost of the 160 rolls of plastic sheeting was \$46,368. Shipping costs to replace water tanks used for the earthquake and flood disasters amounted to \$623.

Additional contributions from the international community were also made towards the relief effort. UNDRO provided \$20,000 in cash for the local purchase of relief items. Norway donated \$11,000 in cash.

TOTAL USG \$151,991

HAITI - Civil Strife

On Jan. 17, 1991, a land dispute escalated into an attack on the village of Gervais in the Artibonite Valley, by a group from a neighboring village. The assailants burned homes, assaulted residents with machetes, stole livestock, and destroyed crops and other property. Some reports indicated that the aggressors may have acted with support from local authorities. Ten days later, rioting erupted in various sections of Port-au-Prince and other Haitian cities. The protests were allegedly based on the false rumor that a coup d'etat was in progress and that Dr. Roger Lafontant, former interior minister under Jean-Claude Duvalier and a leader of the Tontons Macoutes, was soon to be released from prison.

According to the Haitian Red Cross (HRC), at least 58 people were killed and more than 50 were wounded during the attack on Gervais. In Port-au-Prince, many were injured and an estimated 12 people were killed, including two blind musicians who were burned to death. Over 360 houses were reportedly burned or otherwise destroyed in Gervais, and the destruction of property rendered at least 40 families homeless in Port-au-Prince.

A team from the Haitian Disaster Relief Agency, OPDES, along with health care professionals and an engineer from the Haitian Red Cross, traveled to Gervais to assess damage. OPDES also assessed needs in Port-au-Prince and submitted a written request to the U.S. Embassy in Haiti for assistance with displaced families in both areas.

On Feb. 1, the U.S. Ambassador to Haiti, Alvin P. Adams, declared that the two episodes of civil unrest constituted a disaster that was beyond the government's capability to adequately respond. OFDA provided \$25,000 to the USAID/Haiti for the HRC to purchase building materials, food, blankets, medical supplies, and cooking utensils for displaced Haitians, and to cover

administrative costs for relief operations. FFP also allocated 28 MT of PL-480 Title II food to the Haitian Red Cross for a one-time emergency food distribution. The food, valued at approximately \$12,000, was taken from FFP's regular Title II allocations for Haiti.

TOTAL USG \$37,000

HAITI - Emergency

On Dec. 5, 1990, a large explosive device detonated in the midst of a political rally in support of presidential candidate, Jean-Bertrand Aristide. PAHO and the Haitian Red Cross (HRC) reported seven killed and 51 injured by the explosion in Petionville, seven miles outside of Port-au-Prince. Many of the wounded suffered severe lower body injuries, some requiring amputation. Beyond the casualties, there was no substantial damage.

The Haitian Disaster Relief Agency asked for USG assistance after concluding that the need for medical supplies and equipment to deal with the seriousness of the injuries was beyond local capacity. On Dec. 7, 1990, Ambassador Alvin P. Adams declared a disaster and donated \$25,000 to the HRC. The funds were used to purchase medical supplies for private and public hospitals, and to cover some administrative costs relating to the care of the bomb victims. The fund agreement was later amended to purchase emergency medical equipment and supplies to prepare for potential emergencies during the pre- and post-electoral period. The amended fund was also used to procure 720 white sheets and antibiotics from the USG for the Department of Orthopedics of the University Hospital in Haiti.

TOTAL USG \$25,000

JAMAICA - Floods

Torrential rains hit the island of Jamaica from May 21 to 22, 1991, inundating the parishes of St. Catherine and Kingston. Flood waters caused the collapse of the Rio Cobre Diversion Dam, disabled its accompanying spillway and gravity-fed irrigation systems, and broke its thirty-inch pipeline that served the island's major pumping station in Kingston. At least 150,000 people were left without piped water, and 80,000 rural families were temporarily displaced. The affected population

totaled about 550,000. The floods caused an overall estimated damage of about \$33 million.

U.S. Ambassador Glen A. Holden issued a disaster declaration on May 24, and received \$890 under his disaster authority to airfreight 16 3,000-gallon, portable water tanks to Jamaica from the stockpile in Panama. Transport costs to replace the water tanks in the stockpile amounted to \$1,034.

TOTAL USG \$1,924

PANAMA - Floods/Mudslides

From Aug. 11 through Aug. 19, 1991, torrential rains triggered severe flooding and landslides in Bocas del Toro Province, an area rocked by an earthquake four months earlier. Serious effects in the province were felt in the watershed area of the towns of Las Tablas and Barranca Adentro, where huge boulders, large chunks of earth, and massive trees uprooted by the April quake came crashing down from the hills. The combination of floods and mudslides also caused the collapse of the water supply reservoir above Las Tablas.

According to the Government of Panama (GOP), the calamity adversely affected 20,000 people, left two dead and 10 missing, and resulted in 61 injuries. Some 400 homes were submerged under the combination of mud and water. A major concern was the high vulnerability of the populace in Changuinola, Chiriqui Grande, and Bocas del Toro to a potential epidemic caused by stagnant flood water.

The Ministry of Justice's civil protection organization (Sistema Nacional de Proteccion Civil) and the Ministry of Health (MOH) were in charge of local emergency operations. The GOP managed to evacuate about 1,129 affected people to temporary shelters. Most of the immediate needs of the victims were met with food and water from Panamanian sources, and from leftover supplies from the preceding earthquake relief effort. The MOH also monitored the disaster area out of concern that the damage to water and sewerage systems might increase the community's susceptibility to water-borne diseases. The GOP appealed to the international community for emergency assistance in the form of pharmaceutical supplies such as antibiotics, temporary housing materials, and the technical expertise of a

landslide expert to assess the situation and offer suggestions on how to alleviate the effects of future similar hazards.

On Aug. 16, U.S. Deputy Chief of Mission David R. Beall declared that a state of emergency existed in Bocas del Toro, warranting USG disaster assistance. The \$25,000 provided under the Ambassador's Authority and additional funds were used for the following emergency operations and supplies: 60 hours of DOD helicopter airlift services (\$12,000), shipping costs to replace eight 3,000 gallon water tanks in the Panama stockpile (\$512), procurement of 1,000 wool blankets to replace in the stockpile (\$4,050), and transport of excess DOD lumber from Panama City to Bocas del Toro for the local Catholic Charities (\$5,500). The lumber was used to rehabilitate homes and infrastructure in two villages devastated by floods and landslides. In addition, USAID/Panama used \$7,500 for relief activities.

TOTAL USG \$29,562

PERU - Earthquake

From April 4 through April 8, a series of eight seismic shocks, each more destructive than the last, rocked the provinces of Moyabamba, Rioja, and Union in the northeastern department of San Martin, Peru. The successive shocks, ranging from 4.5 to 6.9 on the Richter scale, struck the same region hit by the 6.5 magnitude earthquake in May 1990.

According to the Peruvian Civil Defense, the quake took the lives of 53 people and caused 232 injuries. Over 9,000 houses were damaged, of which 900 were completely destroyed, rendering survivors homeless, and without proper sanitation. The shocks disrupted electrical power and the water supply, along with the island's sewage disposal system. Seven health centers, 78 educational centers, and some island roads also suffered damage.

The Government of Peru (GOP) responded to the disaster by airlifting 130 tents, 2,740 blankets, and 21,412 corrugated iron pieces, along with medical supplies, food, tools, and collapsible water tanks to affected areas. Relief efforts were complicated by torrential rains that obstructed the arrival of helicopter rescue teams. GOP resources were also strained from

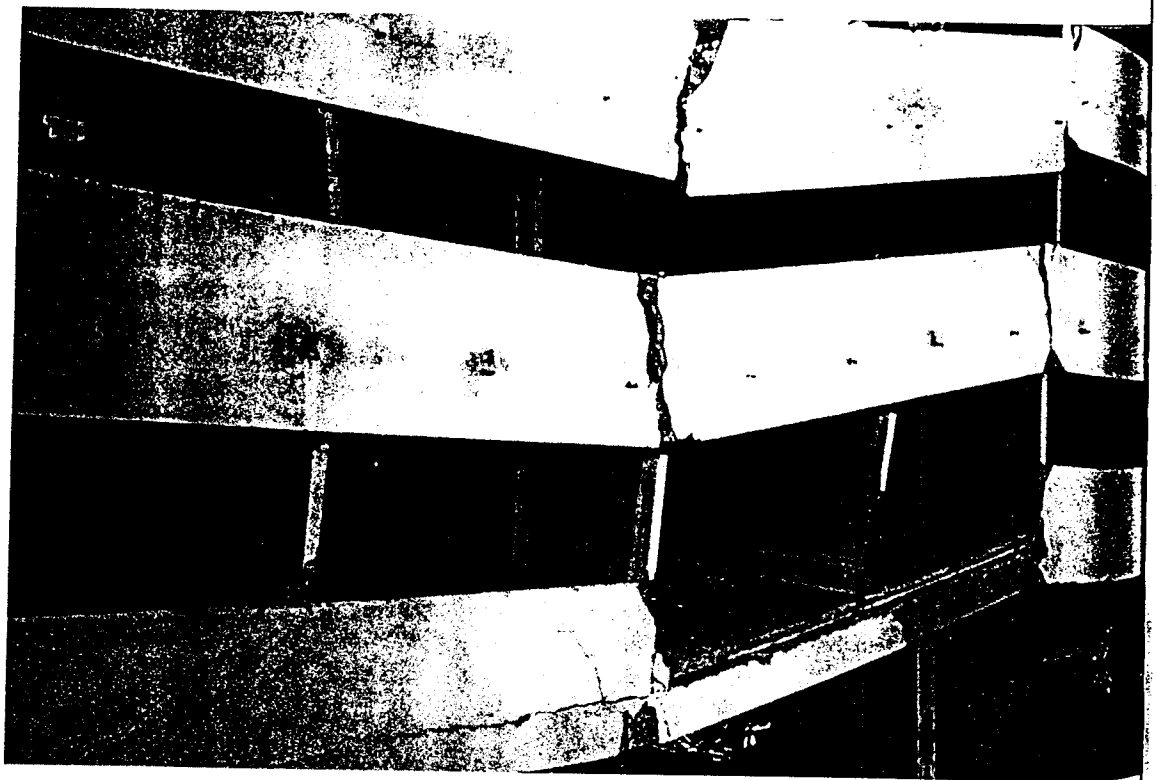
their efforts to combat a concurrent cholera epidemic
(see "Peru - Epidemic").

On April 9, U.S. Ambassador Anthony C.E. Quainton declared a disaster and released \$25,000 to purchase corrugated metal sheets to construct temporary housing for displaced families. Other donors included the EC, which contributed \$620,000 to finance emergency relief programs for quake and cholera victims.

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| TOTAL USG | \$25,000 |
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The April earthquake flattened many houses such as this one in Panama (above) and caused the collapse of the Hotel Olas in Limon, Costa Rica (below)
Photos by Alejandro James, OFDA/Costa Rica





The Sixaola bridge in Costa Rica collapsed during the April earthquake
Photos by Alejandro James, OFDA/Costa Rica

OFDA water tanks in use after the earthquake in Panama

